

1999

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Recommended Citation

Bowcutt, Frederica S. (1999) "A floristic study of Sugarloaf Ridge State Park, Sonoma County, California," *Aliso: A Journal of Systematic and Evolutionary Botany*: Vol. 18: Iss. 1, Article 12.

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A FLORISTIC STUDY OF SUGARLOAF RIDGE STATE PARK, SONOMA COUNTY, CALIFORNIA

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ABSTRACT

A species list of 400 vascular plants was compiled for Sugarloaf Ridge State Park, a 1142 hectare (2820 acre) park in the outer North Coast Ranges within Sonoma County and adjacent western Napa County, California. Relatively undisturbed stands of native perennial bunchgrasses occur as the understory in portions of both the oak woodland and the mixed evergreen forest. Grasslands on serpentine in the park are typically dominated by *Nassella*. One of the state's easternmost coast redwood forests occurs in the park. Nonnative *Centaurea solstitialis* rapidly invades annual grasslands and other disturbed areas in the park. The California Department of Parks and Recreation (DPR) maintains an active prescribed burn program in an effort to control *Centaurea solstitialis* populations. DPR also uses prescribed burning to retard *Pseudotsuga menziesii* establishment in oak woodlands. DPR biologists believe that fire suppression in this region results in an unnatural type conversion of oak woodlands to mixed evergreen forest.

Key words: California state parks, Sonoma County, Sugarloaf Ridge State Park, vascular flora.

INTRODUCTION

In this article I list the vascular plants which occur within Sugarloaf Ridge State Park. Climate, geology, and vegetation are also described. The park occurs in the North Coast Range of northwestern California, mostly in Sonoma County, but including a small area in adjacent Napa County. Until approximately the mid 1800s, the Wappo tribe of indigenous people lived in a village at the headwaters of Sonoma Creek, within current park boundaries (Breck Parkman, personal communications). The convergence of several different plant communities makes this area species rich, an ideal condition for subsistence living. Since then, past land uses have included limited conifer logging, charcoal making (from oaks), and livestock grazing, however, these activities ceased when the park was established in 1964 (California Department of Parks and Recreation 1992).

Given its proximity to urban areas, and many institutions of higher learning, Sugarloaf Ridge State Park is an underutilized teaching resource both for secondary and undergraduate education. The park is an excellent resource for teaching basic field plant ecology. North facing slopes support more mesic vegetation than the south facing slopes facilitating discussion of the impact aspect has on microclimatic conditions. Supporting one of the easternmost *Sequoia sempervirens* stands, the park provides a means to discuss the biogeography and autecology of a prominent species.

The subject of edaphic endemism can be taught using the serpentine chaparral and grasslands in the park. Due to the high oak diversity and resulting hybridization, the opportunity to discuss problems with the species concept exists at Sugarloaf. The successional pattern of *Pseudotsuga menziesii* invading mature oak woodlands, and invasion of grasslands by *Centaurea solstitialis* provides an avenue for discussing the influence of fire in ecosystems and land management. In addition, using the *C. solstitialis* problem in the park, discussion can easily focus on other issues of exotic plant management, including biological control. G. Ledyard Stebbins (1998) recently listed the park as one of the "outdoor floristic museums" in the greater San Francisco Bay area which is "accessible to research workers" helping to make Sonoma County "most favorable" for research opportunities.

LOCATION AND PHYSICAL GEOGRAPHY

Encompassing 1142 hectares (2820 acres), Sugarloaf Ridge State Park ranges in elevation from 183 m (600 feet) to 832 m (2729 feet). The park is located in the mountain range between the Sonoma and Napa valleys. Mount Saint Helena lies to the north-northwest 24 km (15 air miles). The mouth of the Russian River at the Pacific Ocean is due west 55 km (34 air miles). Lake Berryessa is roughly 29 km (18 air miles) to the northeast. Santa Rosa is 16 km (10 air miles) to the west. The small town of Kenwood lies 5 km (3 miles) to the southwest. The park encompasses Bald Mountain, Red Mountain, the upper reaches of Adobe Canyon, and part of Sugarloaf Ridge (Fig. 1). Sonoma

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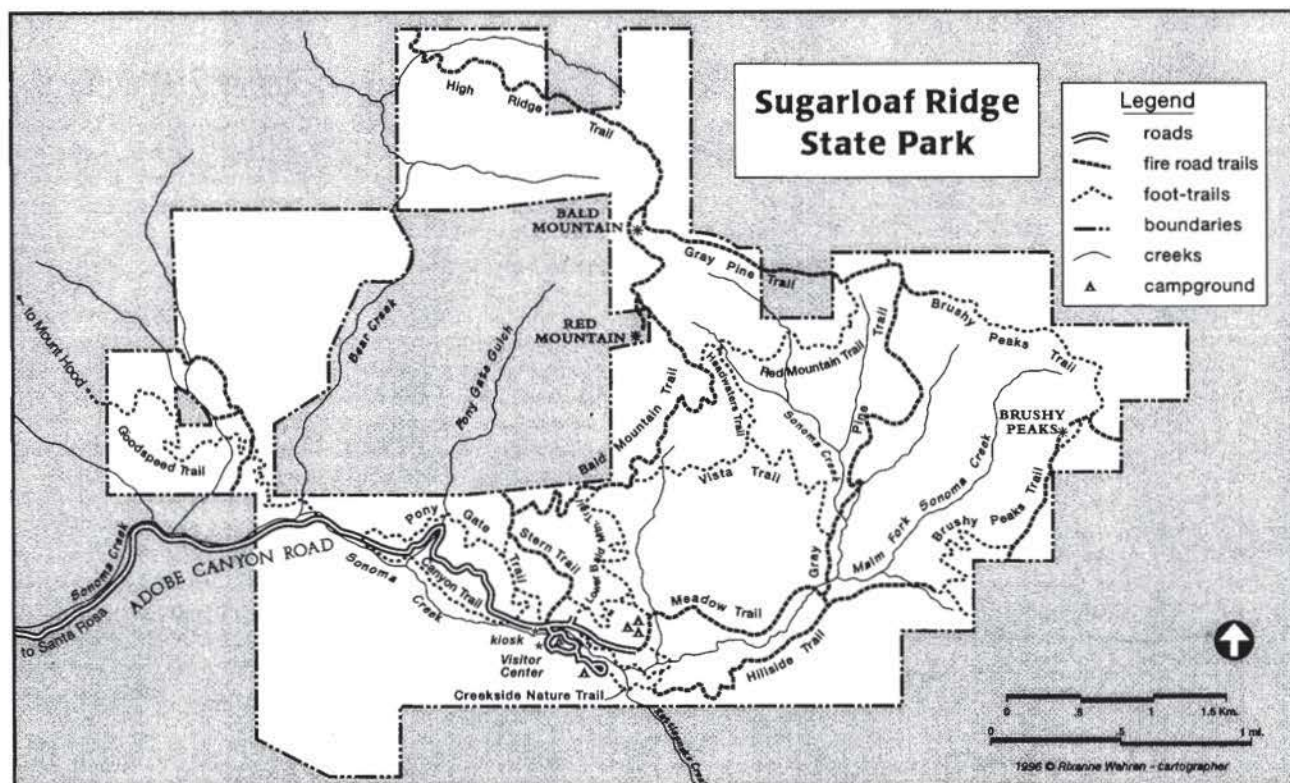


Fig. 1. Map of Sugarloaf Ridge State Park.

Creek bisects the park. Most of the headwaters of this creek are included within the park boundaries. Sonoma Creek ultimately drains, via Sonoma Valley, into San Pablo Bay 32 km (20 air miles) south of the park. Also included in the park are portions of Bear Creek which also drains into Sonoma Creek. Adobe Canyon Road provides access from Highway 12. Hood Mountain County Park connects to the western boundary of Sugarloaf Ridge State Park.

GEOLOGY

Sugarloaf Ridge State Park is relatively diverse geologically (Wagner and Bortugno 1982). Serpentinized ultramafic rocks (peridotite) of Jurassic age are best represented in the northwestern portion of the park. Quaternary landslide deposits are found primarily at the toe of the south-facing slopes below outcrops of serpentinized ultramafic rocks. This pattern is unsurprising given the instability of serpentinized material when wet. The northeastern portion of the park is characterized by the Franciscan Complex. This complex is common in the North Coast Ranges and is a melange of sandstone, shale, conglomerate, chert, greenstone, and metagraywacke with inclusions of serpentinized ultramafic rocks. Sonoma volcanics of Pliocene age characterize Sugarloaf Ridge. A relatively small outcrop of Lower Cretaceous-Upper Jurassic Great Valley Sequence occurs in the eastern portion of the park.

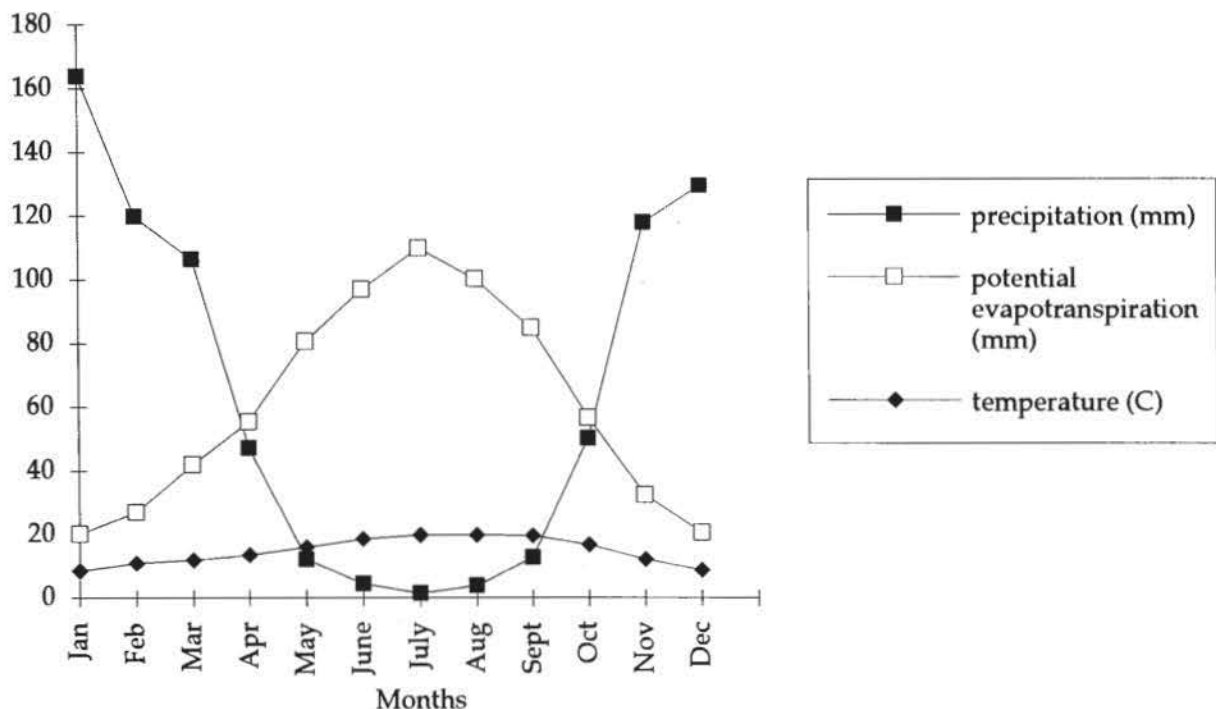
This sequence is a melange of marine mudstone, siltstone, sandstone, and conglomerate.

CLIMATE

Like most of northern California, Sugarloaf Ridge State Park receives a majority of its precipitation during late fall, winter, and spring (Fig. 2). On average, the total annual rainfall is 888.5 mm (35 inches) in Santa Rosa, which, at 16 km (10 air miles) to the west of the park, is the closest weather station (NOAA 1993). The average annual temperature in Santa Rosa is 14.7 C (58.4 F). Being at an inland location, the park has a wide daily temperature range, particularly in summer. During summer the park is hot and dry, and as a result evapotranspiration rates are high (Elford 1964). The evapotranspiration rate is approximated using the Thornthwaite method (Fig. 2). As this approach averages the high and low daily temperatures, it underestimates the actual evapotranspiration rate (Shelton 1978). The average growing season is roughly 200 days (Elford 1964). Winter storms bring strong southerly winds. Freezing conditions begin around mid-November and can occur as late as mid-April (Elford 1964). Snow does fall in winter occasionally, but usually melts quickly.

VEGETATION

Eight vegetation types and associations occur in Sugarloaf Ridge State Park: annual grassland, peren-



Based on climatic data from the National Oceanic and Atmospheric Administration collected between 1961 and 1990.

Fig. 2. Thornthwaite diagram for Santa Rosa, California.

nial grassland, chamise chaparral, serpentine chaparral, white alder riparian woodland, oak woodland, mixed evergreen forest, and coast redwood forest. In general, plant community boundaries intergrade thus creating a complex vegetation mosaic. This is particularly true of the oak woodland and mixed evergreen forest. Roadsides and other disturbed places serve as habitat for a variety of weedy species which are primarily nonnative.

Annual Grassland

Nonnative annual grasses and forbs from Europe dominate most of the grasslands in the park. Dominant species vary and include *Avena barbata*, *A. fatua*, *Bromus diandrus*, *B. hordeaceus*, and *Centaurea solstitialis*. Common associates include *Aira caryophylla*, *Briza minor*, *Lolium multiflorum*, *L. perenne*, *Taeniatherum caput-medusae*, *Lathyrus cicera*, *Trifolium* spp., and *Vicia villosa*. Livestock grazing of park grasslands occurred between 1942 and 1964, and possibly earlier (California Department of Parks and Recreation 1992). This past land use probably helped to favor nonnatives over native species. Occasional native species within the annual grassland include *Calochortus luteus* and *Lupinus bicolor*. *Elymus glaucus*, a native perennial grass, often occurs where the grasslands border with oak woodland.

Park staff burn the grasslands to increase native plant populations and control *Centaurea solstitialis*.

After two consecutive years of prescribed burning in the park, the percent cover of native grassland species increased. In addition, after the burns in July 1993 and 1994, *C. solstitialis* percent cover and the number of its seeds in the seed bank declined significantly (Hastings and DiTomaso 1996). *C. solstitialis* continues to plague many grassland areas considered impractical to burn due to limited access for fire control crews. State parks plans to continue herbicide use in these areas (Hastings and DiTomaso 1996).

Perennial Grassland

Most of the perennial grasslands occur on serpentine substrates at the interface between annual grassland and serpentine chaparral. The perennial grasslands are dominated by *Nassella* spp. Native wildflower diversity is higher in this plant community as compared to the nonnative grassland. Percent cover of vegetation is lower than the nonnative grassland which approaches 100 percent.

Chamise Chaparral

Chamise chaparral occurs primarily on south-facing slopes. Species diversity is relatively low, with *Adenostoma fasciculatum* forming a closed shrub canopy. Occasional shrub associates include *Arctostaphylos manzanita* ssp. *manzanita*, *Heteromeles arbutifolia*, and *Quercus berberidifolia*. The sparse understory is

made up primarily of *Nassella cernua*. During the first few years after burns and other forms of disturbance, herbaceous species diversity increases. Post fire associates include *Apiastrum angustifolium* and *Emmenanthe penduliflora*. *Lomatium repostum*, which is on the California Native Plant Society watch list (List 4), occurs in this community.

Serpentine Chaparral

A distinctive chaparral community occurs on serpentine-derived soils (Hennecke Series in the park). *Ceanothus jepsonii* var. *jepsonii* and *Quercus durata* serve as indicator species. The native perennial bunchgrass, *Melica torreyana*, frequently dominates the sparse understory. Other understory associates include *Galium porrigens* var. *tenue*, *Lessingia ramulosa*, and *Malacothrix floccifera*. A healthy population of *Ceanothus sonomensis* occurs along Goodspeed Trail, on the south-facing slope west of Bear Creek. This species is considered rare statewide by the California Native Plant Society (Skinner and Pavlik 1994).

White Alder Riparian Woodland

Alnus rhombifolia is the dominant tree along much of Sonoma Creek. Associated riparian species include *Acer macrophyllum*, *Artemisia douglasiana*, *Umbellularia californica*, and *Urtica dioica* ssp. *holosericea*. *Rhagadiolus stellatus*, a nonnative herb not reported from elsewhere in Sonoma County, has established in several locations within the riparian corridor (Best et al. 1996). In the lower stretches of the Sonoma Creek, white alder riparian woodland intergrades with coast redwood forest.

Oak Woodland

Oak woodlands within the park are highly variable. *Quercus agrifolia* dominates a majority of the oak woodlands in the park. The understory is sparse except in tree gaps where a variety of herbs grows, including *Lathyrus vestitus*, *Lotus scoparius*, and *Madia gracilis*. Shade-tolerant species in this community include *Sanicula crassicaulis* and *Toxicodendron diversilobum*. Stands of *Q. kelloggii* occur in scattered locations in the park, frequently with a dense understory of *Festuca californica*. On the eastern side of Red Mountain, oak woodland is dominated by *Q. chrysolepis* and *Q. kelloggii* with *Umbellularia californica* and *Acer macrophyllum* interspersed. *Quercus garryana* is abundant from near the confluence of Rattlesnake Creek and Sonoma Creek upstream to approximately the confluence of Malm Fork Sonoma Creek and Sonoma Creek.

In the Sonoma Mountains, *Pseudotsuga menziesii* is invading mature oak woodlands (Barnhart et al. 1996).

The oak woodlands may represent a disclimax created by native people through burning (Breck Parkman, pers. comm.). Impetus existed to manage for oak acorns, which served as a staple food. Without burning, portions of the oak woodlands in the park may ultimately become mixed evergreen forest (Barnhart et al. 1996). To maintain habitat and species diversity, state parks staff burn some of the oak woodlands to reduce *P. menziesii* populations (Marla Hastings, pers. comm.). Based on two 20 m × 50 m plots, one in the oak woodland and one in the mixed evergreen forest, there is some support for this management strategy, albeit limited by the small sample size (Bowcutt unpubl. data). The relative floristic similarity of the two plots was estimated by calculating the Jaccard community coefficient (J), where $J = (C/(A+B+C)) \times 100$ with A = total of number of species in stand A, B = total number of species in stand B, and C = total number of species in both stands A and B (Barbour et al. 1987). My University of California at Santa Cruz Field Ecology students and I found a lower vascular plant species richness in the oak woodland (36 species vs. 46); however, the Jaccard similarity coefficient between the two communities is low (30). Based on this coefficient value, relatively few species occur in both communities; therefore, the total species richness in the park could decline if oak woodland succeeded to mixed evergreen forest. Barnhart et al. (1996) also corroborate this conclusion, stating, "*P. menziesii* invasions will result in reduction of biological diversity in this region of California."

Mixed Evergreen Forest

Mixed evergreen forest is dominated by *Pseudotsuga menziesii*, *Quercus* spp., and *Umbellularia californica*. Total tree canopy cover is roughly 85 percent. Common to occasional tree associates include *Lithocarpus densiflorus* and *Arbutus menziesii*. The herbaceous understory is highly variable and species rich. Common fern and herb associates include *Dryopteris arguta*, *Melica* spp., *Stachys ajugoides* var. *rigida*, *Sanicula crassicaulis*, *Toxicodendron diversilobum*, and *Trientalis latifolia*. Mixed evergreen forest is primarily restricted to the north-facing slope of Sugarloaf Ridge on Sonoma volcanics and the Lower Cretaceous-Upper Jurassic Great Valley Sequence. The soil type mapped for the area is Rock land which is described as being, "in rough mountainous areas where there is little soil material" (U. S. Department of Agriculture 1972). The county soil survey describes the vegetation on this soil as sparse with occasional stunted trees, which is not representative of the area under study. Much of this vegetation in the park grows near the toe of Sugarloaf Ridge, possibly because of ero-

Table 1. Numbers of families, genera, and species summarized for Sugarloaf Ridge State Park, California.

Taxonomic group	Number of families	Percent of total families	Number of genera	Percent of total genera	Number of species	Percent of total species
Ferns and fern allies	7	9.2	12	4.8	14	3.5
Gymnosperms	3	3.9	4	1.6	4	1.0
Angiosperms	66	86.8	236	93.7	382	95.5
Dicotyledons	57	75.0	190	75.4	299	74.8
Monocotyledons	8	10.5	46	18.3	83	20.8
Total	76	100%	252	100%	400	100%

sional material which accumulates, allowing the vegetation to develop more fully.

Coast Redwood Forest

Coast redwood forest is restricted to the more mesic portions of Adobe Canyon, along Sonoma Creek, at lower elevations where the creek has deeply incised the canyon. This stand of *Sequoia sempervirens* represents one of the easternmost in the state; another stand occurs near the small town of Angwin approximately 15 km (9 air miles) to the north-northeast, also in Sonoma County. Within the park, coast redwood forest is a riparian community. On average, the percent cover of *Sequoia sempervirens* within this community in the park is 75 percent. Based on seven tree cores, the age of the older coast redwood trees is roughly 120 years, thus the trees were logged circa 1875 (Bowcutt unpubl.). Evidence of stump sprouting from trees cut during this time is common. *Lithocarpus densiflorus* is a frequent tree associate, although percent cover is low at approximately 5 percent. The herbaceous cover is sparse with low species richness. Herb and fern associates include *Adenocaulon bicolor*, *Dryopteris arguta*, and *Polystichum munitum*. Based on geologic and soil maps, coast redwood forest in the park occurs on Sonoma volcanics (Wagner and Bortugno 1982) in either Rock land or Laniger Loam (U. S. Department of Agriculture 1972).

HISTORY OF BOTANICAL RESEARCH IN THE PARK

Three unpublished vascular plant species lists exist for the park: DiTomaso (1996), Stocking (s.d.), and Wright (1975). Vouchers appeared to be lacking except for a limited number from DiTomaso's list, which was based primarily on vegetation research in the grasslands. Several of his specimens added taxa to the park flora. A floristic study of Sonoma County was recently completed (Best et al. 1996). Specimens collected in the park by a variety of individuals are cited in the county flora and included in this flora when they add taxa. Whatford (1994) created a vegetation map for Sugarloaf Ridge State Park. He focused on areas being invaded by *Centaurea solstitialis* and *Pseudotsuga menziesii*. My floristic surveys were conducted from

1993 through 1997, and included winter, spring, summer, and fall trips. Nearly all the park's trails were surveyed on foot, a couple were surveyed from a vehicle.

FLORA

Documented plants totalled 400 within Sugarloaf Ridge State Park, 75 percent of which are native (Table 1). The three largest families in the park are Asteraceae, Poaceae, and Fabaceae, in descending order. Asteraceae and Poaceae are the two largest families in the state, so their prominence is unsurprising. The high number of leguminous plants is largely due to the high diversity of *Trifolium*. With 15 taxa, it is the best represented genus in the park. Asteraceae, Poaceae, and Fabaceae combined represent 35% of the flora. Further floristic work in the park will no doubt add species to the list; however, the majority are represented in this publication.

Collections made as a part of this study added four taxa to the known flora of Sonoma County: *Carex amplifolia*, *Juncus nevadensis*, *Montia parvifolia*, and *Rhagadiolus stellatus*. *Carex amplifolia* and *R. stellatus* were included in the county flora based on unpublished findings of this floristic research. *Juncus nevadensis*, and *M. parvifolia* represent additions not included in Best et al. (1996). In addition, this work provides vouchers for species listed in Best et al. (1996) without the benefit of a voucher specimen; included in this category are the newly introduced *Trifolium striatum* not included in Hickman (1993) and *Claytonia parviflora*.

MANAGEMENT RECOMMENDATIONS

California Department of Parks and Recreation manages the park for the preservation of native plant biodiversity. Three aggressively invasive exotics, *Cytisus scoparius*, *Foeniculum vulgare*, and *Genista monspessulana*, are currently rare in the park, however, a vigilant manual removal program is recommended to keep these species from becoming management problems in the future. Continued efforts to control *Centaurea solstitialis* and feral pigs are encouraged. Recreational use of horses in the park presents

a means for introduction of nonnative species (e.g., *Trifolium striatum*). Given the recreational value of horseback riding, I do not recommend prohibiting their use. However, attention should be given to controlling new introductions to keep them from becoming invasive problems. This would include frequently monitoring trails used by the horses and around the corral.

Future acquisitions are desired to connect, at least with trail corridors, several local parks to Sugarloaf Ridge State Park including Annadel State Park, Bothe Napa State Park, and Jack London State Park (Bud Getty, pers. comm.). Sugarloaf Ridge State Park is already contiguous with Hood Mountain Regional Park, which is 608 hectares (1500 acres).

FUTURE RESEARCH NEEDS

A thorough survey of 410 hectares (1011 acres) added to the park in 1997 was beyond the scope of this effort and is worthy of future attention. With this addition, the park's total area is 1552 hectares (3831 acres). Voucherless taxa listed in the county flora as being from "Sugarloaf Ridge" are not included in this study. Neither are voucherless taxa on the three unpublished checklists for the park (DiTomaso 1996; Stocking s.d.; and Wright 1975). Voucher specimens are needed to confirm the presence of these and other taxa not included in this study.

ACKNOWLEDGMENTS

I received much research support for which I am grateful. Kate Mawdsley made significant contributions by assisting with collecting, identification, and manuscript editing. Bud Getty of the California Department of Parks and Recreation and his staff provided logistical support. My students in California Floristics at the University of California at Davis collected specimens in spring 1993 and 1994. My students in Ecology Field Quarter at University of California at Santa Cruz helped to collect vegetation data in the park in May 1996. Dr. Ellen Dean and Jean Shepard graciously provided space to work at the University of California Davis Herbarium. They also identified several grasses joyfully. Dr. Michael Vincent identified the *Trifolium striatum*. Dr. Ann Howald gave a phone consultation. Karen Knoll provided field assistance in July 1997. The Davis Herbaria Society helped defray the cost of hiring a cartographer and paid for some travel expenses. Dr. R. K. Benjamin and two anonymous reviewers contributed helpful criticisms on an earlier draft.

ANNOTATED CHECKLIST OF THE VASCULAR PLANTS

Voucher specimens are housed in the University of California Davis Herbarium at the University of Cal-

ifornia (DAV) unless otherwise noted. Voucher specimens exist for 97% of the taxa represented in this floristic study. Nomenclature follows Hickman (1993). Common names were gleaned from several sources: Abrams (1940; 1944; and 1951), Abrams and Ferris (1960), Best et al. (1996), Hickman (1993), Mason (1957), and Munz and Keck (1973). Herbarium abbreviations follow Holmgren et al. (1990). In addition the following notations were used: * for nonnative species and + for unnaturalized garden relicts not included in the numerical analyses.

PTEROPHYTES—Ferns

BLECHNACEAE

WOODWARDIA FIMBRIATA Sm. in Rees.—Chain fern. Rare. Spring in oak woodland along Vista Trail. *Bowcutt 1892*.

DENNSTAEDTIACEAE

PTERIDIUM AQUILINUM (L.) Kuhn var. PUBESCENS L. Underw.—Bracken fern. Common. Coast redwood forest and mixed evergreen forest. *Loredo-Prendeville & Canon 59 (DAV, NCC)*.

DRYOPTERIDACEAE

DRYOPTERIS ARGUTA (Kaulf.) Maxon—Coastal wood fern. Common. Coast redwood forest and mixed evergreen forest. *Bowcutt, Kennedy & Henricks 1754*.

POLYSTICHUM MUNITUM (Kaulf.) C. Presl—Sword fern. Common. Coast redwood forest and ecotone between oak woodland and white alder riparian woodland. *Botany 102 students 103 (DAV, NCC)*.

POLYPODIACEAE

POLYPODIUM CALIFORNICUM Kaulf.—California polypody. Occasional. Mixed evergreen forest. *Bowcutt 1755, Bowcutt 2145*.

POLYPODIUM GLYCYPHYZA D. Eaton—Licorice fern. Occasional. Mixed evergreen forest. *Bowcutt 1875, Loredo-Prendeville & Canon 57 (DAV, NCC)*.

PTERIDACEAE

ADIANTUM JORDANII C. Mueller—California maidenhair. Occasional. Mixed evergreen forest. *Loredo-Prendeville & Canon 56 (DAV, NCC)*, *Botany 102 students 200*.

ASPIDOTIS DENSE (Brackenr.) Lellinger—Indian's dream. Occasional. Serpentine chaparral. *Bowcutt 1939*.

CHEILANTHES INTERTEXTA (Maxon) Maxon—Coastal lip fern. Rare. Rock outcrop in grassland along Vista Trail. *Bowcutt 1897b, Bowcutt 2082*.

PELLAEA ANDROMEDIFOLIA (Kaulf.) Fee—Coffee fern. Occasional. Rock outcrop in mixed evergreen forest. *Bowcutt 1870 (DAV, NCC)*, *Bowcutt & Mawdsley 2081, Bury et al. 295 (DAV, NCC)*.

PENTAGRAMMA TRIANGULARIS (Kaulf.) G. Yatskevich, M.D. Windham & E. Wollenweber—Golden-back fern. Occasional. Mixed evergreen forest. *Loredo-Prendeville & Canon 58 (DAV, NCC)*.

SPHENOPHYTES—Horsetails

EQUISETACEAE

EQUISETUM LAEVIGATUM A. Braun—Smooth scouring rush. Occasional. White alder riparian woodland. *Bowcutt 1894, Lewis & Mutch 16, Lee 105*.

EQUISETUM TELEMATEIA Ehrh. ssp. BRAUNII (Milde) R. L. Hauke—

Giant horsetail. Occasional. White alder riparian woodland along Sonoma Creek. *Botany 102 students 80, Bowcutt & Knoll 2180.*

LYCOPHYTA—Club-mosses

SELAGINELLACEAE

SELAGINELLA WALLACEI Hieron.—Little club-moss, spike-moss. Rare. Rock outcrops. *Bowcutt 1897a.*

CONIFEROPHYTA—Conifers

CUPRESSACEAE

CUPRESSUS SARGENTII Jepson—Sargent cypress. Rare. Serpentine chaparral. *Bowcutt, Mawdsley, & Knoll 2187.*

PINACEAE

PINUS SABINIANA Douglas—Gray pine. Locally common. Chamise chaparral along Gray Pine trail. *1916.*

PSEUDOTSUGA MENZIESII (Mirbel) Franco var. *MENZIESII*—Douglas-fir. Common. Mixed evergreen forest. *Loredo-Prendeville & Canon 55, Adams et al. 260 (DAV, NCC).*

TAXODIACEAE

SEQUOIA SEMPERVIRENS (D. Don) Endl.—Coast redwood. Very localized. Coast redwood forest, mixed evergreen forest. *Loredo-Prendeville & Canon 54.*

ANTHOPHYTA—Flowering plants/DICOTYLENONEAE

ACERACEAE

ACER MACROPHYLLUM Pursh—Big-leaf maple. Common. Mixed evergreen forest. *Loredo-Prendeville & Canon 53 (DAV, NCC), Botany 102 students 290 (DAV, NCC).*

ANACARDIACEAE

TOXICODENDRON DIVERSILOBUM (Torrey & A. Gray) E. Greene—Poison-oak. Common. Coast redwood forest, oak woodland, and mixed evergreen forest. Repeatedly observed and avoided by the author.

APIACEAE

ANGELICA TOMENTOSA S. Watson—Angelica. Rare. Bank of ephemeral creek. *Bowcutt 2204.*

**ANTHRISCUS CAUCALIS* M. Bieb.—Bur-chervil. Rare. Recently burned coast live oak woodland, grassland, and other disturbed areas e.g., roadsides. From Eurasia. *Bowcutt 1859, Bowcutt 2137a.*

APIASTRUM ANGUSTIFOLIUM Nutt.—Wild celery. Rare. Recently cut fire break in chamise chaparral. *Bowcutt 2126.*

**CONIUM MACULATUM* L.—Poison hemlock. Occasional. Annual grassland. From Europe. *Bowcutt 1876.*

**FOENICULUM VULGARE* Miller—Fennel. Rare. One plant along roadside half way up Bald Mountain Road. Two plants along road to Bear Creek Ranch. Park staff has been working to prevent its spread (Bud Getty, pers. comm.). Native to southern Europe. *Bowcutt 2129.*

HERACLEUM LANATUM Michaux—Cow parsnip. Occasional. White alder riparian woodland. *Bowcutt & Green 1826 (DAV, NCC).*

LOMATIUM CALIFORNICUM (Torrey & A. Gray) Mathias & Constance—Lomatium. Rare. Annual grassland. *Bowcutt 2154 (DAV, NCC).*

LOMATIUM DASYCARPUM (Torrey & A. Gray) J. Coulter & Rose var. *DASYCARPUM*—Woolly-fruited lomatium. Occasional. Serpentine

chaparral. *Bury & Herzog 262 (DAV, NCC), Bowcutt & Keeney 1805, Bowcutt, Keeney, & Green 1806 (DAV, NCC).*

LOMATIUM REPOSTUM (Jepson) Mathias—Napa lomatium. Rare. Chamise chaparral. CNPS List 4. *Bowcutt 1922.*

LOMATIUM UTRICULATUM (Torrey & A. Gray) J. Coulter & Rose—Common lomatium. Occasional. Annual grassland. *North 33, Bury & Herzog 261.*

OENANTHE SARMENTOSA J. S. Presl—Pacific oenanthe. Occasional. Coast redwood forest along Sonoma Creek. *Bowcutt 1941.*

OSMORHIZA CHILENSIS Hook. & Arn.—Mountain sweet-cicely. Common. Mixed evergreen forest. *Botany 102 students 29, Botany 102 students 83, Adam & Weick 296.*

PERIDERIDIA KELLOGGII (A. Gray) Mathias—Kellogg's yampah. Grassland along Vista Trail. *Bowcutt, Mawdsley, & Knoll 2189, Bowcutt, Mawdsley, & Knoll 2192.*

SANICULA BIPINNATIFIDA Hook. & Arn.—Purple sanicle, poison sanicle. Rare. Grassy openings in mixed evergreen forest and coast live oak woodland. *Lewis & Mutch 1.*

SANICULA CRASSICAULIS DC.—Pacific sanicle, gamble weed. Common. Mixed evergreen forest and white alder riparian woodland. *Lewis & Mutch s.n..*

SANICULA LACINIATA Hook. & Arn.—Coast sanicle. Reported by Stocking (s.d.) and Wright (1975). Collected in Adobe Canyon and several other inland Sonoma County locations (Best et al. 1996). Constance (1993) reports this species as occurring only along the north and central coast.

**SCANDIX PECTIN-VENERIS* L.—Shepherd's needle, Venus' needle. Common. Oak woodland. Native to Mediterranean. *Lewis & Mutch 14, Botany 102 students 88.*

**TORILIS ARVENSIS* (Hudson) Link—Hedge-parsley. Common. Coast live oak woodland and mixed evergreen forest. Native to central and southern Europe. *Bowcutt 1862.*

ARALIACEAE

ARALIA CALIFORNICA S. Watson—California spikenard, elk's clover. Occasional. Along Sonoma Creek in mixed evergreen forest. *Bowcutt 1900 (DAV, NCC).*

ARISTOLOCHIACEAE

ARISTOLOCHIA CALIFORNICA Torrey—Pipevine. Occasional. Coast redwood forest and mixed evergreen forest. Collected near confluence of Bear and Sonoma Creeks. *Bowcutt, Kennedy, & Henricks 1762.*

ASTERACEAE

ACHILLEA MILLEFOLIUM L.—Yarrow. Common. Annual grassland, oak woodland, and serpentine chaparral. *North 52, Togioka and Waraich 236.*

ACHYRACHAENA MOLLIS Schauer—Blow-wives. Occasional. Annual grassland. *Bowcutt 2153b.*

ADENOCAULON BICOLOR Hook.—Indian guide, silver arrow. Common. Coast redwood forest and mixed evergreen forest. *Bowcutt 1873.*

AGOSERIS APARGIOIDES (Less.) E. Greene var. *APARGIOIDES*—Agoseris. Occasional. Oak woodland. *North 53.*

AGOSERIS GRANDIFLORA (Nutt.) E. Greene—Large-flowered agoseris. Occasional. Coast live oak woodland. *Bowcutt 1866.*

AGOSERIS HETEROPHYLLA (Nutt.) E. Greene—Annual agoseris. Rare. Rocky opening in serpentine chaparral. *Bowcutt 1804.*

AGOSERIS RETRORSA (Benth.) E. Greene—Spear-leaved agoseris. Occasional. Mixed evergreen forest. *North 54.*

ANAPHALIS MARGARITACEA (L.) Benth. & Hook.—Pearly everlasting. Occasional. Grasslands. *Bowcutt 1905.*

**ANTHEMIS COTULA* L.—Mayweed. Rare. Grassy opening in chamise chaparral. Native to Europe. Observed in flower by K. Mawdsley. *Bowcutt 1890.*

- ARTEMISIA DOUGLASIANA Besser—Mugwort, wormwood. Abundant. White alder riparian woodland. *Bowcutt 1902*.
- BACCHARIS PILULARIS DC.—Coyote brush. Locally common. Invading annual grasslands in upper reaches of Adobe Canyon floor. *Bowcutt 2132*.
- CALYCADENIA TRUNCATA DC.—Rosin weed. Common. Annual grassland. *Bowcutt, Mawdsley, & Knoll 2190*.
- *CARDUUS Pycnocephalus L.—Italian thistle. Abundant. Annual grassland and oak woodland. Native to Mediterranean. *Botany 102 students 43, Bowcutt, Henricks, & Kennedy 1771*.
- *CENTAUREA MELITENSIS L.—Tocalote. Occasional. Grassy opening in chamise chaparral. Native to southern Europe. *Bowcutt 1891, Bowcutt 2136 (DAV, NCC)*.
- *CENTAUREA SOLSTITIALIS L.—Yellow star-thistle. Abundant. Annual grassland. Native to southern Europe. *North 28*.
- *CHAMOMILLA SUAVEOLENS (Pursh) Rydb.—Pineapple weed. Abundant. Disturbed places. Native to northwestern North America and northeastern Asia. *Lewis & Mutch 9, Botany 102 students 23*.
- *CICHORIUM INTYBUS L.—Chicory. Rare. Roadside in campground. Native to Europe. *Bowcutt 2200*.
- CIRSIIUM OCCIDENTALE (Nutt.) Jepson var. VENUSTUM (E. Greene) Jepson—Venus thistle. Rare. Opening in mixed evergreen forest. *Bowcutt 1906*.
- *CIRSIIUM VULGARE (Savi) Ten.—Bull thistle. Occasional. White alder riparian woodland. Native to Europe. *Bowcutt 1928*.
- CONYZA CANADENSIS (L.) Cronq.—Horseweed. Opening in mixed evergreen forest. *Bowcutt 2064 (DAV, NCC)*.
- ERIGERON BIOLETTII E. Greene—Bioletti's fleabane daisy. Collected in Adobe Canyon and on Mt. Hood (Best et al. 1996).
- ERIGERON PHILADELPHICUS L.—Philadelphia daisy. Growing with *Woodwardia fimbriata* at a seep in oak woodland along Vista Trail. *Mawdsley 43*.
- ERIOPHYLLUM CONFERTIFLORUM (DC.) A. Gray var. CONFERTIFLORUM—Golden-yarrow. Rare. Roadcuts in chamise chaparral. *Bowcutt 1919, Bowcutt 2128*.
- ERIOPHYLLUM LANATUM (Pursh) James Forbes var. ACHILLAEODES (DC.) Jepson—Woolly sunflower. Common. Serpentine chaparral. *Bowcutt 2169, Botany 102 students 45*.
- FILAGO CALIFORNICA Nutt.—Herba impia. Common. Serpentine chaparral. *Bowcutt, Keeney, & Green 1816*.
- *FILAGO GALLICA L.—Filago. Common. Annual grassland. Native to Mediterranean. *Bowcutt 1855*.
- HELENIUM PUBERULUM DC.—Sneezeweed. Rare. White alder riparian woodland. *Bowcutt 1930*.
- HEMIZONIA CONGESTA DC. ssp. LUZULIFOLIA (DC.) Babc. & H.M. Hall—Hayfield tarweed. Common. Grassy opening in coast live oak woodland and serpentine chaparral. *Bowcutt 1889, Bowcutt 1938, Bowcutt 2060*.
- HIERACIUM ALBIFLORUM Hook.—White-flowered hawkweed. Occasional. Mixed evergreen forest. *North 49*.
- *HYPOCHOERIS GLABRA L.—Smooth cat's-ear. Common. Annual grassland. Native to Europe. *North 26*.
- *HYPOCHOERIS RADICATA L.—Rough cat's-ear. Common. Annual grassland. Native to Europe. *North 41*.
- *LACTUCA SERRIOLA L.—Wild lettuce, prickly lettuce. Rare. Observed by the author in disturbed area along Gray Pine trail near junction with Vista trail. Native to Europe.
- LASTHENIA CALIFORNICA Lindley—Goldfields. Locally common. Serpentine chaparral. *North 30*.
- LESSINGIA RAMULOSA A. Gray—Sonoma lessingia. Locally common. Serpentine chaparral. *Bowcutt 1937*.
- MADIA ELEGANS Lindley ssp. VERNALIS Keck—Common madia. Rare in park. Sunny opening in mixed evergreen forest. *Bowcutt 1869, Bowcutt 2205*.
- MADIA EXIGUA (Smith) A. Gray—Threadstem madia. Common. Serpentine chaparral. *Bowcutt 1819, Bowcutt 1885*.
- MADIA GRACILIS (Smith) Keck—Slender tarweed. Common. Coast live oak woodland. *Bowcutt 2160, Bowcutt & Kennedy 1832*.
- MADIA MADIOIDES (Nutt.) E. Greene—Woodland madia. Common. Mixed evergreen forest. *Botany 102 students 6, Botany 102 students 48, Botany 102 students 205, Bowcutt, Kennedy, & Henricks 1758 (DAV, NCC)*.
- MADIA NUTANS (E. Greene) Keck—Nodding madia. Grassland. Reported by DiTomaso and Wright. Also collected in Adobe Canyon and on Mt. Hood (Best et al. 1996).
- MADIA SATIVA Molina—Coast tarweed. Rare. Grassland. *Bowcutt, Mawdsley, & Knoll 2184, Bowcutt, Mawdsley, & Knoll 2199*.
- MALACOTHRIX FLOCCIFERA (DC.) S. F. Blake—Woolly malacothrix. Locally common. Serpentine chaparral. *Bowcutt, Kennedy, & Henricks 1750*.
- PSILOCARPHUS TENELLUS Nutt. var. TENELLUS—Woolly-marbles. Occasional. Ruderal. *Bowcutt 2142b*.
- *RHAGADIOLUS STELLATUS (L.) Gaertner. Locally abundant. Roadsides in white alder riparian woodland. Native to Europe. *Lewis & Mutch 25, Bowcutt, Henricks, & Kennedy 1778 (DAV, NCC)*.
- *SENECIO VULGARIS L.—Groundsel. Rare. Annual grassland and opening in coast live oak woodland. Native to Eurasia. *Bowcutt 2077 (DAV, NCC)*.
- *SILYBUM MARIANUM (L.) Gaertner—Milk thistle. Occasional. Annual grassland and disturbed places. Native to the Mediterranean. *North 55*.
- SOLIDAGO CALIFORNICA Nutt.—California goldenrod. Rare. Along ephemerally moist ditch in grassland on edge of riparian. *Bowcutt, Mawdsley, & Knoll 2197*.
- *SONCHUS ASPER (L.) Hill ssp. ASPER—Prickly sow thistle. Rare. Opening in mixed evergreen forest. Native to Europe. *Bowcutt 2171 (DAV, NCC), Bowcutt, Henricks, & Kennedy 1772*.
- *SONCHUS OLERACEUS L.—Common sow thistle. Common. Disturbed places. *North 7*.
- STEPHANOMERIA EXIGUA Nutt. ssp. CORONARIA (E. Greene) Gottlieb—Stephanomeria. Roadcut in coast live oak woodland and chamise chaparral trailside. *Bowcutt 2062 (DAV, NCC)*.
- *TARAXACUM OFFICINALE Wigg.—Dandelion. Rare. Mixed evergreen forest. Native to Europe. *Bowcutt, Henricks, & Kennedy 1783*.
- *TRAGOPOGON PORRIFOLIUS L.—Salsify. Rare. Disturbed places. Native to Europe. *North 36*.
- UROPAPPUS LINDLEYI (DC.) Nutt.—Silver puffs. Occasional. Rocky opening in serpentine chaparral. *Bowcutt 1820*.
- WYETHIA ANGUSTIFOLIA (DC.) Nutt.—Narrow-leaved mule-ears. Occasional. Oak scrub along Brushy Peak trail. *Bowcutt 1828, Bowcutt 1925*.
- WYETHIA GLABRA A. Gray—Mules ears. Rare. Oak woodland. *Bowcutt 2130*.

BETULACEAE

- ALNUS RHOMBIFOLIA Nutt.—White alder. Locally dominant. White alder riparian woodland along Sonoma Creek. *Bowcutt, Henricks, & Kennedy 1773*.
- CORYLUS CORNUTA Marsh var. CALIFORNICA (A. DC.) W. Sharp—Hazelnut. Rare. Coast redwood forest, mixed evergreen forest, and white alder riparian woodland. *Bowcutt, Henricks, & Kennedy 1767*.

BORAGINACEAE

- AMISINCKIA MENZIESII (Lehm.) Nelson & J. F. Macbr. var. INTERMEDIA (Fischer & C. Meyer) Ganders—Fiddleneck, rancher's fire-weed. Occasional. Open oak woodland. *Botany 102 students 32*.
- CRYPTANTHA MURICATA (Hook. & Arn.) Nelson & J. F. Macbr.—Jones' cryptantha. Collected in the park by Baker (Best et al. 1996).
- CYNOGLOSSUM GRANDE Lehm.—Hound's tongue. Rare. Oak woodland. *Bowcutt 2090, Botany 102 students 86*.

**MYOSOTIS DISCOLOR* Pers.—Forget-me-not. Occasional. Mixed evergreen forest. Native to Europe. *Bowcutt, Henricks, & Kennedy 1795*.

PLAGIOBOTHRYUS NOTHOFULVUS (A. Gray) A. Gray—Popcorn flower. Occasional. Annual grassland. *Botany 102 students 101, Botany 102 students 279 (DAV, NCC)*.

BRASSICACEAE

ATHYSANUS PUSILLUS (Hook.) E. Greene—Dwarf alysanus. Rare. Annual grassland. *Bowcutt & Mawdsley 2085*.

BARBAREA ORTHOCERAS Ledeb.—American winter cress. Rare. Annual grassland in campground. *Bowcutt & Mawdsley 2068 (DAV, NCC)*.

**CAPSELLA BURSA-PASTORIS* (L.) Medikus—Shepherd's purse. Occasional. Annual grassland. Native to Europe. *Bowcutt 2070*.

CARDAMINE CALIFORNICA (Torrey & A. Gray) E. Greene—Milk maids, tooth wort. Occasional. Oak woodland. *Bowcutt 2089*.

CARDAMINE OLIGOSPERMA Torrey & A. Gray—Bitter-cress. Rare. Mixed evergreen forest. *Bowcutt 1757*.

GUILLENIA LASIOPHYLLA (Hook. & Arn.) E. Greene—California mustard. Disturbed places. Reported by DiTomaso (1996), Stocking (s.d.), and Wright (1975). Collected nearby in burned chaparral on Mt. Hood. *Baker 11697 (NCC)*.

**HIRSCHFELDIA INCANA* (L.) Lagr.-Fossat—Hedge mustard. Occasional. Recently burned coast live oak woodland and grassland. Native to Mediterranean. *Bowcutt 1857, Bullock & Beaver 206*.

LEPIDIUM STRICTUM (S. Watson) Rattan—Sharp-podded pepper-grass. Locally abundant. Along trails in annual grasslands and roadsides. *Bowcutt 1843a, Bowcutt 2074, Lewis & Mutch 12, Adams et al. 250 (DAV, NCC)*.

**LUNARIA ANNUA* L.—Money plant, moonwort. Rare. Mixed evergreen forest along Adobe Canyon Road. Native to Europe. *Bowcutt & Green 1797 (DAV, NCC)*.

RORIPPA NASTURIUM-AQUATICUM (L.) Hayek—Water cress. Rare. Growing in seepy areas. *Bowcutt, Kennedy, & Henricks 1786*.

STREPTANTHUS GLANDULOSUS Hook. ssp. *GLANDULOSUS*—Jewelflower. Rare. Serpentine grassland. *Bury & Herzog 289*.

THYSANOCARPUS CURVIPES Hook.—Lacepod, fringedpod. Occasional. Grassland. Observed by the author. Reported by DiTomaso (1996), Stocking (s.d.), and Wright (1975). Collected "probably in the vicinity of Mt. Hood" (Best et al. 1996).

CALYCANTHACEAE

CALYCANTHUS OCCIDENTALIS Hook. & Arn.—Spicebush, sweet shrub. Occasional. Coast redwood forest and mixed evergreen forest at confluence of Sonoma and Bear Creeks. *Bowcutt 1764 (DAV, NCC)*.

CAMPANULACEAE

HETEROCODON RARIFLORUM Nutt.—Heterocodon. Rare. Vernal wet places. *DiTomaso & Kaiser s.n. (private collection)*.

TRIODANIS BIFLORA (Ruiz Lopez & Pavon) E. Greene—Venus looking-glass. Rare. Disturbed sites. *DiTomaso & Kaiser s.n. (private collection)*.

CAPRIFOLIACEAE

LONICERA HISPIDULA Douglas var. *VACILLANS* A. Gray—Honeysuckle. Common. Mixed evergreen forest, seep in oak woodland, and serpentine chaparral. *Bowcutt, Henricks, & Kennedy 1748*.

SAMBUCUS MEXICANA C. Presl—Blue elderberry. Occasional. Annual grassland. *Bowcutt 1822*.

SYMPHORICARPUS ALBUS (L.) S. F. Blake var. *LAEVIGATUS* (Fern.) S. F. Blake—Snowberry. Occasional. Mixed evergreen forest. *Bowcutt, Kennedy, & Henricks 1763*.

CARYOPHYLLACEAE

**CERASTIUM GLOMERATUM* Thuill.—Mouse-ear chickweed. Occasional. Annual grassland. Native to Europe. *Lewis & Mutch 13, Waraich 229, Daehler & Lu 255*.

MINUARTIA DOUGLASII (Torrey & A. Gray) Mattf.—Douglas' sandwort. Occasional. Serpentine chaparral. *Bowcutt & Kennedy 1811*.

**PETORRHAGIA NANTEUILII* (Bernat) F. Ball & Heyw.—Proliferous pink. Common. Annual grassland, opening in mixed evergreen forest, and roadsides. Native to southwestern Europe. *Loredo-Prendeville & Canon 67 (DAV, NCC), Botany 102 students 224, Botany 102 students 285*.

SILENE CALIFORNICA Durand—Indian pink. Occasional. Recently burned coast live oak woodland. *Bowcutt 1858*.

**SILENE GALLICA* L.—Common catchfly. Common. Annual grassland, serpentine chaparral, and roadsides. Native to Europe. *1814 (DAV, NCC), Waraich & Togioka 240, Bullock & Beaver 241, Botany 102 students 280 (DAV, NCC)*.

**SPERGULA ARVENSIS* L. ssp. *ARVENSIS*—Stickwort, starwort. Recently burned coast live oak woodland. Native to Europe. *Bowcutt 1860*.

**SPERGULARIA RUBRA* (L.) J. S. Presl & C. Presl—Sand-spurrey. Common. Growing in middle of trail in annual grassland. Native to Europe. *Bowcutt & Mawdsley 2076*.

**STELLARIA MEDIA* (L.) Villars—Common chickweed. Common. Oak woodland and disturbed places. Native to southwestern Europe. *Botany 102 students 82, Bowcutt & Mawdsley 2066b*.

STELLARIA NITENS Nutt.—Shining chickweed. Rare and inconspicuous. Disturbed places. *DiTomaso & Kaiser s.n. (private collection)*. Also reported by Stocking (s.d.).

CISTACEAE

HELIANTHEMUM SCOPARIUM Nutt.—Peak rush-rose. Occasional. Chamise chaparral along Gray Pine trail. *Bowcutt 1917*.

CONVOLVULACEAE

CALYSTEGIA COLLINA (E. Greene) Brummitt—Morning-glory. Rare. Serpentine chaparral. *Beever 213, Bury & Herzog 275*.

CALYSTEGIA OCCIDENTALIS (A. Gray) Brummitt ssp. *OCCIDENTALIS*—Morning-glory. Occasional. Annual grassland. *Bowcutt 2163 (DAV, NCC)*.

CALYSTEGIA PURPURATA (E. Greene) Brummitt ssp. *PURPURATA*—Morning-glory. Occasional. Serpentine chaparral and white alder riparian woodland. *Bowcutt 1749, Bowcutt 1932*.

**CONVOLVULUS ARVENSIS* L.—Bindweed. Occasional. Disturbed places, e.g., in campground and around the horse corrals. Native to Europe. *Bowcutt, Mawdsley, & Knoll 2198*.

CRASSULACEAE

DUDLEYA CYMOSA (Lemaire) Britton & Rose—Live-forever. Occasional. Rock outcrop in mixed evergreen forest. *Bowcutt 1877*.

CUCURBITACEAE

MARAH FABACEUS (Naudin) E. Greene var. *AGRESTIS* (E. Greene) K. M. Stocking—California man-root. Occasional. Opening in mixed evergreen forest. *Bowcutt 1775*.

CUSCUTACEAE

CUSCUTA CALIFORNICA Hook. & Arn. var. *CALIFORNICA*—Dodder. Rare. In grasslands, parasitic on *Hemizonia congesta*. *Bowcutt & Mawdsley 2193*.

ERICACEAE

ARBUTUS MENZIESII Pursh—Pacific madrone. Common. Mixed evergreen forest. *Bury et al. 266 (DAV, NCC)*.

ARCTOSTAPHYLOS CANESCENS Eastw. ssp. CANESCENS—Hoary manzanita. Occasional. Chamise chaparral. *Bowcutt 2135*.

ARCTOSTAPHYLOS MANZANITA C. Parry ssp. MANZANITA—Manzanita. Common. Chamise chaparral, serpentine chaparral, and oak woodland. *Bowcutt 2065 (DAV & NCC), Lee 23, Botany 102 students 97*.

ARCTOSTAPHYLOS VISCIDA Parry ssp. PULCHELLA (J. Howell) Wells—White-leaved manzanita. Serpentine chaparral. Collected in Sonoma Creek Canyon near Mt. Hood (Best et al. 1996). Also reported by Stocking (s.d.) and Wright (1975).

EUPHORBICEAE

EREMOCARPUS SETIGER (Hook.) Benth.—Doveweed, turkey mullein. Occasional. Annual grassland. *Bowcutt 1886*.

FABACEAE

ASTRAGALUS GAMBELIANUS E. Sheldon—Dwarf locoweed. Occasional. Annual grassland. Collected in Adobe Canyon (Best et al. 1996). Also reported by DiTomaso (1996) and Wright (1975).

*CYTISUS SCOPARIUS (L.) Link—Scotch broom. Rare. Mixed evergreen forest. Native to southern Europe and northern Africa. *Loredo-Prendeville & Canon 62*.

*GENISTA MONSPESSULANA (L.) L. Johnson—French broom. Rare. Six foot tall, single plant found along Adobe Canyon Road just east of Goodspeed Trail head. Native to Mediterranean. *Bowcutt 2093 (DAV, NCC)*.

*LATHYRUS CICERA L.—Red pea. Common. Annual grassland, open oak woodland, opening in mixed evergreen forest, and disturbed places. Native to Europe. *Bowcutt 1843, Botany 102 students 42, Botany 102 students 89, Daehler & Lu 252 (DAV, NCC)*.

*LATHYRUS HIRSUTUS L.—Caley pea. Rare. Annual grassland. Native to Europe. *Bowcutt 2164*.

LATHYRUS VESTITUS Nutt. var. OCHROPETALUS (Piper) Isely—Common Pacific pea. Common. Oak woodland and white alder riparian woodland. *Lee 85, Beever et al. 233 (DAV, NCC)*.

LOTUS HUMISTRATUS E. Greene—Short-podded lotus. Common. Annual grassland and serpentine chaparral. *Bowcutt 1913, Bowcutt 2084, Bullock et al. 207*.

LOTUS MICRANTHUS Benth.—Small-flowered lotus. Occasional. Grassy opening in oak woodland. *Botany 102 students 93, Bowcutt 1861*.

LOTUS PURSHIANUS (Benth.) Clements & E. G. Clements var. PURSHIANUS—Spanish clover. Common. Annual and perennial grasslands. *Bowcutt & Green 1801*.

LOTUS SCOPARIUS (Nutt.) Otley—Deerweed. Occasional. Grassy opening in mixed evergreen forest, sun flecks in oak woodland, roadcuts. *Bowcutt 1871*.

LOTUS WRANGELIANUS Fischer & C. Meyer—California lotus. Occasional. Open oak woodland and disturbed places. *Botany 102 students 31*.

LUPINUS ALBIFRONS Benth. var. ALBIFRONS—Silver lupine. Common. Grassy opening in mixed evergreen forest and oak woodland. *Botany 102 students 104, Bowcutt 2158 (DAV, NCC)*.

LUPINUS BICOLOR Lindley—Lindley's annual lupine, miniature lupine. Common. Open oak woodland. *Botany 102 students 37*.

LUPINUS LATIFOLIUS J. Agardh var. LATIFOLIUS—Lupine. Oak woodland. *Botany 102 students 95 (DAV, NCC)*.

LUPINUS NANUS Benth.—Douglas' annual lupine. Common. Annual grassland. *Bowcutt 2083, Lewis & Mutch 2, Botany 102 students 232*.

*MEDICAGO POLYMORPHA L.—Burclover. Abundant. Ruderal areas and white alder riparian woodland. Native to Mediterranean. *Lewis & Mutch 24, Bury & Herzog 294 (DAV, NCC), Botany 102 students 209, Botany 102 students 210*.

PICKERINGIA MONTANA Nutt.—Chaparral pea. Occasional. Chaparral, oak scrub. *Bowcutt 1923*.

RUPERTIA PHYSODES (Hook.) Grimes—California-tea, Rupert's scurfp. Rare. Along a small tributary to Sonoma Creek near group camp in riparian vegetation on edge of mixed evergreen forest. *Bowcutt 1903*.

THERMOPSIS MACROPHYLLA Hook. & Arn. var. MACROPHYLLA—False-lupine. Occasional. Along seasonal creek on edge of grassland. *Bowcutt 1821, Botany 102 students 102, Bury & Herzog 273*.

TRIFOLIUM ALBOPURPUREUM Torrey & A. Gray var. DICHOTOMUM (Hook. & Arn.) Isely—Common Indian clover. Occasional. Grassland, rocky slopes, and serpentine. *Botany 102 students 242a*.

TRIFOLIUM BIFIDUM A. Gray var. DECIPIENS E. Greene—Notch-leaved clover. Occasional. Grassy opening in oak woodland. *Lee 91*.

*TRIFOLIUM CAMPESTRE Schreber—Hop clover. Occasional. Ruderal, along Meadow Trail. Native to Europe. *Mawdsley 45*.

TRIFOLIUM CILIOLATUM Benth.—Tree clover. Occasional. Opening in mixed evergreen forest. *Loredo-Prendeville & Canon 65, Beever 230, Bullock & Togioka 242b (DAV, NCC)*.

TRIFOLIUM DEPAUPERATUM Desv. var. DEPAUPERATUM—Dwarf sack clover. Occasional. Annual grasslands, grassy openings in oak woodland and mixed evergreen forest. *Bowcutt 2075, Lewis & Mutch 4*.

*TRIFOLIUM DUBIUM Sibth.—Shamrock. Common. Annual grassland. Native to Europe. *Lewis & Mutch 8*.

*TRIFOLIUM FRAGIFERUM L.—Strawberry clover. Roadside. Native to Europe. *Bowcutt & Knoll 2186*.

*TRIFOLIUM HIRTUM All.—Rose clover. Occasional. Grasslands and roadcuts in serpentine. Native to Eurasia. *Bowcutt 1854, Bowcutt 2122, Bury & Herzog 287, Bowcutt & Kennedy 1823*.

TRIFOLIUM MICROCEPHALUM Pursh—Small-headed clover, maiden clover. Occasional. Opening in mixed evergreen forest. *Loredo-Prendeville & Canon 63*.

TRIFOLIUM MICRODON Hook. & Arn.—Valparaiso clover, square-head clover. Common. Opening in oak woodland. *Lee 90*.

TRIFOLIUM OLIGANTHUM Steudel—Few-flowered clover. Common. Annual grassland. *Botany 102 students 98*.

*TRIFOLIUM STRIATUM L.—Clover. Rare. Near horse corral in disturbed area. Native to Europe. This recently introduced taxon is not reported by Isley (1993), however, Best et al. (1996) include it in their Sonoma County flora without a voucher. *Bowcutt 2141*.

*TRIFOLIUM SUBTERRANEUM L.—Subterranean clover. Occasional. Disturbed places. Native to southern Europe and northern Africa. *Botany 102 students 271*.

TRIFOLIUM VARIEGATUM Nutt.—White-tipped clover. Occasional. Seasonal drainage. *Bury et al. 277 (DAV, NCC)*.

TRIFOLIUM WILLDENOVII Sprengel—Tomcat clover. Occasional. Grassland. *Adams et al. 272*.

*VICIA LUTEA L.—Yellow vetch. Rare. Annual grassland. Native to Europe. *Bowcutt 1849, Bowcutt 2152*.

*VICIA SATIVA L. ssp. SATIVA—Narrow-leaved vetch. Common. Opening in oak woodland. Native to Europe. *Botany 102 students 79 (DAV, NCC)*.

*VICIA VILLOSA Roth ssp. VARIA (Host) Corbiere—Vetch. Common. Disturbed places. Native to Europe. *Bullock & Beever 221 (DAV, NCC), Lewis & Mutch 15*.

FAGACEAE

LITHOCARPUS DENSIFLORUS (Hook. & Arn.) Rehder—Tan oak. Common. Coast redwood forest and mixed evergreen forest. *Bowcutt, Henricks, & Kennedy 1765*.

QUERCUS AGRIFOLIA Nee var. AGRIFOLIA—Coast live oak. Abundant. Coast live oak woodland, chamise chaparral, and mixed evergreen forest. *Bowcutt 1909b, Lee 87, Adams, Weick, Daehler & Lu 258*.

QUERCUS BERBERIDIFOLIA Liebm.—Scrub oak. Occasional. Oak

woodland. Observed along Bald Mountain Trail. Also in oak scrub along Brushy Peak Trail. *Bowcutt 1920*.

QUERCUS CHRYSOLEPIS Liebm.—Canyon live oak. Common. Mixed evergreen forest. *Bowcutt 1872, Bowcutt 1909a, Bowcutt, Henricks, & Kennedy 1774*.

QUERCUS DURATA Jepson var. *DURATA*—Leather oak. Abundant. Serpentine chaparral. *Bowcutt 1752b (DAV, NCC), Bury & Herzog 256*.

QUERCUS GARRYANA Hook. var. *GARRYANA*—Oregon oak. Abundant. Mixed evergreen forest and oak woodland. *Bowcutt 2138 (DAV, NCC), Bowcutt & Knoll 2201*.

QUERCUS KELLOGGII Newb.—Black oak. Common. Oak woodland. *Canon & Lored-Prendeville 73 (DAV, NCC)*.

QUERCUS WISLIZENI A. DC. var. *FRUTESCENS* Engelm.—Interior live oak. Rare. Oak scrub. *Bowcutt 1921*.

GENTIANACEAE

CENTAURIUM TRICHANTHUM (Griseb.) Robinson—Centaury. Locally common. Mesic meadow called Columbine Meadow. *Bowcutt, Mawdsley, & Knoll 2195*.

GERANIACEAE

**ERODIUM BOTRYS* (Cav.) Bertol.—Filaree. Occasional. Annual grassland. Native to southern Europe. *Bowcutt 1796a, Bowcutt 2071*.

**ERODIUM* cf. *BRACHYCARPUM* (Godron) Thell.—Filaree. Occasional. Annual grassland along Lower Bald Mountain trail. Native to southern Europe. *Bowcutt 1887, Bowcutt 2123*.

**ERODIUM CICUTARIUM* (L.) L'Her.—Red-stemmed filaree. Common. Annual grassland. Native to Eurasia. *Bowcutt 1796, Bowcutt 1824*.

**ERODIUM MOSCHATUM* (L.) L'Her.—Storksbill. Common. Ruderal situations. Native to Europe. *Bowcutt 2072*.

**GERANIUM DISSECTUM* L.—Cranesbill. Common. Annual grassland. Native to Europe. *Botany 102 students 22, Bowcutt 1784, Bowcutt 1825b*.

**GERANIUM MOLLE* L.—Cranesbill. Occasional. Annual grassland. Native to Europe. *Bowcutt 1825*.

GROSSULARIACEAE

RIBES INERME Rydb. var. *INERME*—White-stemmed gooseberry. Occasional. Mixed evergreen forest. *Bowcutt 1780*.

RIBES ROEZLII Regel var. *CRUENTUM* (E. Greene) Rehder—Sierra gooseberry. Rare. Oak woodland. Reported by Wright (1975). Collected on Mt. Hood and on east slope of Mt. Hood (Best et al. 1996).

HIPPOCASTENACEAE

AESCULUS CALIFORNICA (Spach) Nutt.—California buckeye. Common. Coast live oak woodland. *Bowcutt 1865*.

HYDROPHYLLACEAE

EMMENANTHE PENDULIFLORA Benth.—Whispering bells. Rare. Recently burned or otherwise disturbed chamise chaparral. *Bowcutt 2125*.

ERIODICTYON CALIFORNICUM (Hook. & Arn.) Torrey—Yerba santa. Occasional. Chamise chaparral. *Bowcutt 1918*.

NEMOPHILA HETEROPHYLLA Fischer & C. Meyer—Variable-leaved nemophila. Common. Mixed evergreen forest. *Bowcutt 1753, Bowcutt & Mawdsley 2087*.

NEMOPHILA MENZIESII Hook. & Arn. var. *ATOMARIA* (Fischer & C. Meyer) Chandler—Baby white-eyes. Occasional. Mixed evergreen forest and grassland. *Adam & Weick 254, Lewis & Mutch 3, Bowcutt & Green 1794*.

NEMOPHILA MENZIESII Hook. & Arn. var. *MENZIESII*—Baby blue-eyes.

Occasional. Opening in oak woodland. *Lored-Prendeville & Canon 70*.

PHACELIA CALIFORNICA Cham.—California phacelia. Occasional. Road cut in oak woodland. *Bowcutt 1808*.

PHACELIA IMBRICATA E. Greene ssp. *IMBRICATA*. Occasional. Grassy opening in oak woodland. *Bowcutt 2157*.

PHACELIA DISTANS Benth.—Wild-heliotrope. Rare. Collected in Sonoma Creek Canyon by Howell in 1935 (Best et al. 1996). Also reported in park by Stocking (s.d.) and Wright (1975).

HYPERICACEAE

HYPERICUM CONCINNUM Benth.—Gold-wire. Occasional. Serpentine chaparral. *Bowcutt 1884*.

JUGLANDACEAE

+*JUGLANS CALIFORNICA* S. Watson var. *HINDSII* Jepson—Northern California black walnut. Rare. Oak woodland at old homesites. Native to north-central California, frequently used as root stock for *Juglans regia*. *Botany 102 students 81, Bowcutt & Knoll 2202*.

LAMIACEAE

**LAMIUM PURPUREUM* L.—Red henbit. Rare. Annual grassland and white alder riparian woodland. Native to Europe. *Botany 102 students 23, Botany 102 students 61*.

LEPECHINIA CALYCINA (Benth.) Epling—Pitcher sage. Rare. Oak scrub along Brushy Peak Trail. *Bowcutt 1924*.

**MARRUBIUM VULGARE* L.—Horehound. Rare. Disturbed places. Native to Europe. *Bowcutt 2063*.

**MELISSA OFFICINALIS* L.—Bee balm, lemon balm. Rare. Trailhead for Goodspeed trail on edge of dirt parking area, coast redwood forest. Native to southern Europe. *Bowcutt 1943*.

**MENTHA PULEGIUM* L.—Pennyroyal. Rare. Outflow area from an old stock pond in a grassy opening in oak woodland. Along Vista trail, near junction with Bald Mountain trail. Native to Europe. *Bowcutt 2059*.

MONARDELLA VIRIDIS Jepson—Coyote mint. Occasional. Serpentine chaparral. *Bowcutt 1879*.

SALVIA COLUMBARIAE Benth.—Chia. Rare. Roadcut along Adobe Canyon Road. *Bowcutt 2167*.

SCUTELLARIA CALIFORNICA A. Gray—California skullcap. Rare. Grassland along Meadow Trail. *Bowcutt 1904*.

STACHYS AJUGOIDES Benth. var. *RIGIDA* Jepson & Hoover—Hedgenettle. Common. Mixed evergreen forest, oak woodland and white alder riparian woodland. *Bowcutt 1807, Adams & Weick 283, Waraich & Togioka 234*.

STACHYS ALBENS A. Gray—White hedge-nettle. Rare. Spring in oak woodland along Vista Trail, seep at Columbine Meadow, and along pond on old Harr Ranch. *Bowcutt 1893, Bowcutt, Mawdsley, & Knoll 2172*.

LAURACEAE

UMBELLULARIA CALIFORNICA (Hook. & Arn.) Nutt.—California bay. Common. Coast redwood forest, mixed evergreen forest, and white alder riparian woodland. *Botany 102 students 18, Botany 102 students 259 (DAV, NCC)*.

LINACEAE

HESPEROLINON MICRANTHUM (A. Gray) Small—Small-flowered dwarf flax. Occasional. Serpentine chaparral. *Bowcutt & Kennedy 1817*. *HESPEROLINON SPERGULINUM* (A. Gray) Small—Dwarf flax. Rare. Chamise chaparral and serpentine chaparral. *Bowcutt & Kennedy 1882, Bowcutt & Kennedy 1910*.

LYTHRACEAE

- *LYTHRUM HYSSOPIFOLIUM L.—Hyssop loosestrife. Rare. Disturbed places. Native to Europe. *Bowcutt 1839*.

MALVACEAE

- SIDALCEA DIPLOSCYPHA (Torrey & A. Gray) Benth.—Fringed sidalcea. Occasional. Perennial grassland. *Bowcutt 1800, Botany 102 students 239*.

MORACEAE

- *FICUS CARICA L.—Fig. Rare. Along seasonal creek in mixed evergreen forest within Pony Gate Gulch, appears to be an adventive. Native to Mediterranean. *Bowcutt 1867*.

MYRTACEAE

- +EUCALYPTUS GLOBULUS Labill.—Blue gum. Rare. Roadside near park employee home in northwestern portion of park. *Bowcutt & Knoll 2185*.

OLEACEAE

- FRAXINUS LATIFOLIA Benth.—Oregon ash. Rare. Toe of Sugarloaf Ridge in mixed evergreen forest within campground. *Bowcutt 1777, Bowcutt & Knoll 2178*.

ONAGRACEAE

- CLARKIA AMOENA (Lehm.) Nelson & J. F. Macbr. ssp. HUNTIANA (Jepson) Harlan Lewis & M. Lewis—Farewell-to-spring. Common. Annual grassland and serpentine chaparral. *Bowcutt 1810b*.
CLARKIA GRACILIS (Piper) Nelson & J. F. Macbr. ssp. GRACILIS—Clarkia. Occasional. Serpentine chaparral. *Bowcutt 1803, Bowcutt 1810a, Botany 102 students 274*.
CLARKIA PURPUREA (Curtis) Nelson & J. F. Macbr. ssp. QUADRIVULNERA (Douglas) Harlan Lewis & M. Lewis—Purple clarkia. Occasional. Coast live oak woodland. *Bowcutt & Green 1813, Bowcutt & Green 1834, Bowcutt 2159*.
CLARKIA UNGUICULATA Lindley—Red ribbons. Rare. Grassy opening in mixed evergreen forest. *Bowcutt 1868*.
EPILOBIUM CANUM (E. Greene) Raven ssp. LATIFOLIUM (Hook.) Raven—Hummingbird's trumpet, California fuchsia. Rare. Large rock outcrop along Vista Trail. *Bowcutt 2061a*.
EPILOBIUM MINUTUM Lehm.—Minute willow-herb. Occasional. Serpentine chaparral. *Bowcutt & Green 1818*.

OROBANCHACEAE

- OROBANCHE BULBOSA G. Beck—Broom-rape. Chamise chaparral. Reported in the park on the south slope of Sugarloaf Peak. Refer to Best et al. 1996, pp. 180 and 208 under *Ceanothus sonomensis*.

PAPAVERACEAE

- DENDROMECON RIGIDA Benth.—Bush poppy. Chaparral. Reported by Stocking (s.d.) and Wright (1975). Collected on Mt. Hood (Best et al. 1996).
ESCHSCHOLZIA CALIFORNICA Cham.—California poppy. Common. Grasslands. *Bullock 245*.

PLANTAGINACEAE

- PLANTAGO ERECTA E. Morris—California plantain. Occasional. Annual grassland and serpentine chaparral. *Beever et al. 219 (DAV, NCC), Adams et al. 263, Bowcutt & Green 1805, Bowcutt & Mawdsley 2086*.
*PLANTAGO LANCEOLATA L.—English plantain. Occasional. Annual grassland. Native to Europe. *Lewis & Mutch 5*.

POLEMONIACEAE

- GILIA CAPITATA Sims. ssp. CAPITATA—Blue field gilia. Rare. Recently burned coast live oak woodland. *Bowcutt 1864*.
GILIA TRICOLOR Benth. ssp. TRICOLOR—Tricolor gilia. Common. Perennial grassland, serpentine chaparral. *Bowcutt 1799, Lee 106, Botany 102 students 215*.
LINANTHUS ANDROSACEUS (Benth.) E. Greene—Mustang-clover. Common. Grassland. *Beever 214*.
LINANTHUS BICOLOR (Nutt.) E. Greene—Bicolored linanthus. Uncommon. Grassland. *DiTomaso s.n.*
LINANTHUS PARVIFLORUS (Benth.) E. Greene—Linanthus. Occasional. Annual grassland and perennial grassland. *Bowcutt, Keeney, & Green 1802, Bowcutt & Green 1788, Botany 102 students 100, Beever 214, Adams et al. 253 (DAV, NCC)*.
NAVARRETIA LEUCOCEPHALA Benth. ssp. LEUCOCEPHALA—White-flowered navarretia. Rare. Collected in Adobe Canyon between Mt. Hood and Sugarloaf Ridge (Best et al. 1996).
NAVARRETIA SQUARROSA (Esch.) Hook. & Arn. Skunkweed. Occasional. Dirt roads. *Bowcutt 1915*.
PHLOX GRACILIS E. Greene—Slender phlox. Rare. Grassy opening in oak woodland. *Botany 102 students 92, Bowcutt & Kennedy 1833*.

POLYGALACEAE

- POLYGALA CALIFORNICA Nutt.—California milkwort. Occasional. Mixed evergreen forest and serpentine chaparral. *Togioka & Waraich 246, Botany 102 students 265*.

POLYGONACEAE

- ERIOGONUM LUTEOLUM E. Greene—Buckwheat. Locally common. Serpentine chaparral. *Bowcutt 1912*. Also collected on trail to Mt. Hood by Ross in 1984 (Best et al. 1996).
ERIOGONUM NUDUM Benth. var. NUDUM—Naked buckwheat. Rare. Coast live oak woodland, opening in mixed evergreen forest, and serpentine chaparral. *Bowcutt 1898, Bowcutt 1907*.
*POLYGONUM ARENASTRUM Boreau.—Common knotweed, doorweed. Occasional. Disturbed places. Native to Eurasia. *Bowcutt 2120 (DAV, NCC)*.
*POLYGONUM HYDROPIPER L.—Smartweed. Locally abundant in pond in northwestern portion of park. Native to Europe. *Bowcutt, Mawdsley, & Knoll 2174*.
*RUMEX ACETOSELLA L.—Sheep sorrel. Common. Annual grassland. Native to Europe. *Bowcutt 1827, Bowcutt & Green 1787, Botany 102 students 10, Botany 102 students 62, Loreda-Prendeville & Canon 72 (DAV, NCC)*.
*RUMEX CRISPUS L.—Curly dock. Rare. Annual grassland and ruderal. Native to Eurasia. *Bowcutt 1880, Bowcutt 2121*.
*RUMEX PULCHER L.—Fiddle dock. Occasional. Annual grassland. Native to Mediterranean. *Bowcutt 1845, Bowcutt 1881*.
RUMEX SALICIFOLIUS J. A. Weinm. cf. var. SALICIFOLIUS—Willow dock. Common. Spring in oak woodland along Vista Trail. *Bowcutt 1896*.

PORTULACACEAE

- CALANDRINIA CILIATA (Ruiz Lopez & Pavon) DC.—Red maids. Occasional. Annual grassland. *Bowcutt 2080*.
CLAYTONIA EXIGUA Torrey & A. Gray ssp. EXIGUA. Occasional. Serpentine chaparral. *Adams et al. 286*.
CLAYTONIA PARVIFLORA Hook. ssp. PARVIFLORA—Small-leaved montia. Common. Mixed evergreen forest and white alder riparian woodland. *Bury et al. 291 (DAV, NCC)*.
CLAYTONIA PERFOLIATA Willd.—Miner's lettuce. Common. White alder riparian woodland. *Lewis & Mutch 19, Waraich, Togioka, & Beever 228*.

MONTIA FONTANA L.—Water-chickweed. Occasional. Annual grassland in campground. *Bowcut 1792, Bowcut & Mawdsley 2067.*
 MONTIA PARVIFOLIA (DC.) E. Greene—Montia. Rare. Growing on mossy bank along Sonoma Creek in mixed evergreen forest. *Bowcut 1874.*

PRIMULACEAE

*ANAGALLIS ARVENSIS L.—Scarlet pimpernel. Common. Ruderal situations. Native to Europe. *Loredo-Prendeville & Canon 69 (DAV, NCC), Beever 218, Botany 102 students 297 (DAV, NCC).*
 DODECATHEON HENDERSONII A. Gray—Shooting star. Occasional. Oak woodland. *Bowcut 2091, Lee 96.*
 TRIENTALIS LATIFOLIA Hook.—Star flower. Common. Coast redwood forest and mixed evergreen forest. *Bowcut 1756.*

RANUNCULACEAE

AQUILEGIA FORMOSA Fischer—Columbine. Locally common. Mesic meadow called Columbine Meadow. *Bowcut, Mawdsley, & Knoll 2194.*
 DELPHINIUM NUDICAULE Torrey & A. Gray—Scarlet larkspur. Occasional. Oak woodland. *Botany 102 students 94, Beever, Togioka, & Bullock 235.*
 RANUNCULUS CALIFORNICUS Benth.—California buttercup. Common. Grasslands and oak woodland. *Lewis & Mutch 6, Waraich, Togioka, & Bullock 223.*
 *RANUNCULUS MURICATUS L.—Prickle-fruited buttercup. Common. Annual grassland in campground, mixed evergreen forest, and ruderal habitats. Native to Europe. *Lewis & Mutch 7, Lewis & Mutch 11, Loredo-Prendeville & Canon 60, Botany 102 students 300.*

RHAMNACEAE

CEANOTHUS CUNEATUS (Hook) Nutt. var. CUNEATUS—Buckbrush. Occasional. Chamise chaparral. *Bowcut 1911, Bowcut 2079, Bowcut 2134.*
 CEANOTHUS FOLIOSUS C. Parry var. FOLIOSUS—Wavyleaf ceanothus. Rare. Chaparral. Reported by Stocking (s.d.) and Wright (1975). Collected on Mt. Hood in 1893 (Best et al. 1996).
 CEANOTHUS JEPSONII E. Greene var. JEPSONII—Muskbrush. Common. Serpentine chaparral. *Adams & Weick 269, Bowcut & Green 1752c.*
 CEANOTHUS OLIGANTHUS Nutt. var. SOREDIATUS (Hook. & Arn) Hoover—Jim brush. Occasional. Chamise chaparral. *Bowcut 2133 (DAV, NCC).*
 CEANOTHUS PARRYI Trel.—Parry's ceanothus, lady bush. Occasional. Mixed evergreen forest. *Bowcut & Green 1798.*
 CEANOTHUS SONOMENSIS J. Howell—Sonoma ceanothus. Locally common. Serpentine chaparral. CNPS List 1B. *Bowcut & Covert 2139, Bury & Herzog 264.*
 RHAMNUS CALIFORNICA Eschsch.—California coffeeberry. Occasional. Mixed evergreen forest. *Bowcut 1899.*
 RHAMNUS CROCEA Nutt.—Spiny redberry. Rare. Reported by Wright (1975). Collected near Sonoma Creek at foot of Mt. Hood in 1902 (Best et al. 1996).

ROSACEAE

ADENOSTOMA FASCICULATUM Hook. & Arn.—Chamise. Abundant. Chamise chaparral. *Daehler, Lu, Bury, & Herzog 270 (DAV, NCC).*
 APHANES OCCIDENTALIS (Nutt.) Rydb.—Western lady's mantle, dew cup. Rare. *DiTomaso & Kaiser s.n. (private collection).*
 CERCOCARPUS BETULOIDES Torrey & A. Gray var. BETULOIDES—Mountain-mahogany, birch-leaf mountain-mahogany. Occasional. Chamise chaparral. *Bowcut 1908.*

HETEROMELES ARBUTIFOLIA (Lindley) Roemer—Toyon. Common. Mixed evergreen forest. *Bury et al. 257 (DAV, NCC).*

HOLODISCUS DISCOLOR (Pursh) Maxim.—Oceanspray. Rare. Mixed evergreen forest. *Bowcut 2148.*

POTENTILLA GLANDULOSA Lindley ssp. GLANDULOSA—Sticky cinquefoil. Rare. White alder riparian woodland. *Bowcut 1842.*

*PRUNUS CERASIFERA Ehrh.—Cherry plum. Occasional. Near campground. Native to southeastern Europe. *Bowcut 1929, Loredo-Prendeville & Canon 75, Bowcut & Mawdsley 2066a (DAV, NCC).*

PRUNUS VIRGINIANA L. var. DEMISSA (Nutt.) Torrey—Western chokecherry. Rare. White alder riparian woodland. *Bowcut 2161 (DAV, NCC).*

ROSA GYMNOCARPA Nutt. in Torrey & A. Gray—Wood rose. Common. Coast redwood forest and mixed evergreen forest. *Bowcut 1766b (DAV, NCC).*

*RUBUS DISCOLOR Weihe & Nees—Himalaya-berry. Occasional. Seep in opening within oak woodland along Hillside Trail. Native to Europe. *Bowcut 1836.*

RUBUS PARVIFLORUS Nutt.—Thimbleberry. Rare. Coast redwood forest and mixed evergreen forest. *Bowcut 1766a.*

RUBUS URSINUS Cham. & Schidl.—California blackberry. Occasional. Opening and seep in oak woodland. *Loredo-Prendeville & Canon 77.*

RUBIACEAE

GALIUM APARINE L.—Bedstraw, goosegrass. Common. Draw within grassland at edge of coast live oak woodland. Although listed as native here by Dempster (1993), she suggests that it may be native to Europe. *Botany 102 students 20, Botany 102 students 222, Botany 102 students 267 (DAV, NCC), Bowcut 1851b.*

*GALIUM DIVARICATUM Lam.—Lamarck's bedstraw. Occasional. Annual grassland. Native to the Mediterranean. *Bowcut 1812.*

*GALIUM MURALE (L.) All.—Tiny bedstraw. Occasional. Meadow in campground. Native to Europe. *Bowcut & Mawdsley 2069.*

*GALIUM PARIENSE L.—Wall bedstraw. Occasional. Annual grassland. Native to Mediterranean. *Bowcut 1888, Bowcut 2124, Bowcut 2181.*

GALIUM PORRIGENS Dempster var. TENUE (Dempster) Dempster—Climbing bedstraw. Common. Serpentine chaparral, chamise chaparral, and oak woodland. *Bowcut 1752d, Bowcut 1831, Botany 102 students 49, Botany 102 students 268 (DAV, NCC).*

SALICACEAE

SALIX LASIOLEPIS Benth.—Willow. Occasional. White alder riparian woodland. *Bowcut 2073, Bowcut 2137b.*

SAXIFRAGACEAE

BOYKINIA OCCIDENTALIS Torrey & A. Gray—Coast boykinia. Rare. Coast redwood forest along Sonoma Creek. *Bowcut 1940.*

HEUCHERA MICRANTHA Lindley—Alumroot. Rare. Mixed evergreen forest. *Bowcut 2147.*

LITHOPHRAGMA AFFINE A. Gray—Woodland star. Occasional. Oak woodland. *Botany 102 students 17, Botany 102 students 71 (DAV, NCC).*

LITHOPHRAGMA HETEROPHYLLUM (Hook. & Arn.) Torrey & A. Gray—Woodland star. Occasional. Mixed evergreen forest. *Bowcut & Keeney 1759.*

SAXIFRAGA CALIFORNICA E. Greene—California saxifrage. Rare. Oak woodland. *Bowcut & Mawdsley 2092.*

SCROPHULARIACEAE

ANTIRRHINUM VIRGA A. Gray—Tall snapdragon. Rare. Collected in Adobe Canyon and at the foot of Mt. Hood (Best et al. 1996).

CASTILLEJA ATTENUATA (A. Gray) Chuang & Heckard—Valley tas-

sels. Locally abundant in May 1998. Nonnative grassland. *Mawdsley 30*.

CASTILLEJA FOLIOLOSA Hook. & Arn.—Wooly Indian paintbrush, chaparral paintbrush. Occasional. Oak scrub along Brushy Peak Trail and serpentine outcrop in mixed evergreen forest. *Bowcutt 1926, Bowcutt 2168, Loredo-Prendeville & Canon 64*.

COLLINSIA HETEROPHYLLA Buist—Chinese houses. Locally common. Oak woodland. *Bowcutt 1830*.

COLLINSIA SPARSIFLORA Fischer & C. Meyer var. *ARVENSIS* (E. Greene) Jepson—Few-flowered blue-eyed Mary. Locally common. Annual grassland. *Botany 102 students 99*.

MIMULUS AURANTIACUS Curtis—Sticky monkey flower. Common. Serpentine chaparral and openings in mixed evergreen forest. *Loredo-Prendeville & Canon 66, Bullock 216, Bury & Herzog 281*.

MIMULUS CARDINALIS Benth.—Scarlet monkey flower. Rare. White alder riparian woodland. *Bowcutt 1935*.

MIMULUS CONGDONII Robinson—Congdon's monkey flower. Rare. Probably in burned chaparral area. Collected on "southeast slope of Mt. Hood" (Best et al. 1996).

MIMULUS DOUGLASII (Benth.) A. Gray—Purple mouse ears. Rare. Probable on serpentine, collected on "southeast slope of Mt. Hood" (Best et al. 1996).

MIMULUS GUTTATUS DC.—Common monkey flower. Rare. Spring in oak woodland. *Botany 102 students 276*.

MIMULUS KELLOGGII (E. Greene) A. Gray—Kellogg's monkey flower. Rare. Collected on "southeast slope of Mt. Hood" (Best et al. 1996).

MIMULUS MOSCHATUS Lindley—Musk monkeyflower. Rare. Along pond. *Bowcutt, Mawdsley, & Knoll 2173*.

**PARENTUCELLIA VISCOSA* (L.) Caruel—Yellow parentucellia. Ruderal, between horse stables and the day use parking lot. Native to Europe. *Mawdsley s.n. (private collection)*.

PENSTEMON HETEROPHYLLUS Lindley var. *HETEROPHYLLUS*—Foothill penstemon. Occasional. Serpentine chaparral. *Bowcutt, Keeney, & Green 1809 (DAV, NCC)*.

SCROPHULARIA CALIFORNICA Cham. & Schldl. ssp. *CALIFORNICA*—California figwort, bee plant. Occasional. Seep in opening in oak woodland. *Bowcutt 1835*.

TRIPHYSA ERIANTHA (Benth.) Chuang & Heckard ssp. *ERIANTHA*—Butter-and-eggs, Johnny-tuck. Occasional. Grassland. Reported by DiTomaso (1996), Stocking (s.d.), and Wright (1975). Collected along Adobe Canyon Road near park (Best et al. 1996).

SOLANACEAE

SOLANUM XANTI A. Gray—Purple nightshade. Rare. Opening in oak woodland. *Loredo-Prendeville & Canon 76*.

URTICACEAE

URTICA DIOICA L. ssp. *HOLOSERICA* (Nutt.) Thorne—Hoary nettle, stinging nettle. Occasional. White alder riparian woodland. *Bowcutt 1901*.

VALERIANACEAE

PLECTRITIS BRACHYSTEMON Fischer & C. Meyer—Plectritis. Occasional. Oak woodland. *Bowcutt 1829*.

VERBENACEAE

VERBENA LASIOSTACHYS Link—Western verbena. Occasional. White alder riparian woodland. *Bowcutt 1933*.

VIOLACEAE

VIOLA OCELLATA Torrey & A. Gray—Western heart's ease. Occasional. Coast redwood forest. *Bowcutt 2143, Baker 955 (CAS)*.

VISCACEAE

PHORADENDRON VILLOSUM (Nutt.) Nutt.—Oak mistletoe. Occasional. Growing on a coast live oak tree within a grassland. *Bowcutt, Mawdsley, & Knoll 2191, Bowcutt & Knoll 2203*.

VITACEAE

VITIS CALIFORNICA Benth.—California wild grape. Occasional. Observed by the author within riparian zone along Sonoma Creek near Goodspeed Trail head. Also collected in "Adobe Canyon adjacent to Mt. Hood" (Best et al. 1996).

MONOCOTYLEDONEAE

CYPERACEAE

CAREX AMPLIFOLIA Boott—Sedge. Occasional. Mixed evergreen forest and white alder riparian woodland. *Bowcutt, Kennedy, & Henricks 1776, Bowcutt 1934 (DAV, NCC)*.

CAREX BUXBAUMII Wahl.—Sedge. Occasional. Small draw in *Elymus glaucus* dominated grassland. *Bowcutt 1851a*.

CAREX DENSE L. Bailey—Dense sedge. Locally common. Mixed evergreen forest. *Bowcutt, Kennedy, & Henricks 1785*.

CAREX GLOBOSA Boott—Sedge. Occasional. Mixed evergreen forest. *Bowcutt 1760 (DAV, NCC)*.

CAREX OVALIS Good—Sedge. Occasional. Mixed evergreen forest. *Bowcutt 1782a*.

CAREX TUMULICOLA Mke.—Foothill sedge. Occasional. Meadow in campground. *North 12, Botany 102 students 292*.

CYPERUS ERAGROSTIS Lam.—Sedge. Common. Moist disturbed places and white alder riparian woodland. *Bowcutt 1837*.

IRIDACEAE

IRIS FERNALDII R. Foster—Iris. Occasional. Mixed evergreen forest. *Bowcutt 1761 (DAV, NCC), Beever 227*.

SISYRINCHium BELLUM S. Watson—Blue-eyed grass. Occasional. Annual grassland and open oak woodland. *Botany 102 students 39, Bullock, Togioka, & Waraich 244 (DAV, NCC)*.

JUNCACEAE

JUNCUS BALTICUS Willd.—Wire rush. Occasional. Moist open places. *Bowcutt 1828b, Botany 102 students 251*.

JUNCUS BUFONIUS L. var. *BUFONIUS*—Toad-flax. Common. Disturbed places. *Bowcutt 1840, North 14, Bury & Herzog 251b, Botany 102 students 281*.

JUNCUS EFFUSUS L. var. *PACIFICUS* Fern. & Wieg.—Rush. Common. Seasonally moist swales. *Bowcutt 1781*.

JUNCUS NEVADENSIS S. Watson—Rush. Locally common. Freshwater marsh at stock pond. *Bowcutt & Knoll 2182a*.

JUNCUS PATENS E. Meyer—Rush. Occasional. Annual grassland. *Bowcutt 1848, Bowcutt 2153a*.

JUNCUS XIPHIODES E. Meyer—Rush. Occasional. Spring in oak woodland along Vista Trail and white alder riparian woodland. *Bowcutt 1895, Bowcutt 1936, Bowcutt 2179*.

LUZULA COMOSA E. Meyer—Wood rush. Occasional. Meadow in campground and openings in oak woodland. *North 11*.

LEMNACEAE

LEMNA MINUSCULA Herter—Duckweed. Locally abundant in pond in northwestern portion of park. *Bowcutt, Mawdsley, & Knoll 2175*.

LILIACEAE

BRODIAEA ELEGANS Hoover ssp. *ELEGANS*—Harvest brodiaea. Rare. Annual grassland. *Bowcutt 1847, DiTomaso & Kaiser s.n. (private collection)*.

- CALOCHORTUS AMABILIS Purdy—Yellow globe lily, Diogenes' lantern. Common. Serpentine chaparral. *Botany 102 students 217*.
- CALOCHORTUS LUTEUS Lindley—Yellow mariposa lily. Occasional. Annual grassland. *Bowcut 1850*.
- CHLOROGALUM POMERIDIANUM (DC.) Kunth.—Soap plant. Common. Annual grassland and openings in mixed evergreen forest. Observed by the author and reported by DiTomaso (1996), Stocking (s.d.), and Wright (1975).
- DICHELOSTEMMA CAPITATUM Alph.—Wood ssp. CAPITATUM—Blue dicks. Common. Grasslands and openings in mixed evergreen forest. *Loredo-Prendeville & Canon 68, Bullock, Togioka, & Waraich 237*.
- DICHELOSTEMMA CONGESTUM (Sm.) Kunth.—Ookow. Occasional. Grassland. *Bowcut 2149, Bowcut 2170*.
- DISPORUM HOOKERI (Torrey) Nicholson—Fairy bells. Occasional. Coast redwood forest and mixed evergreen forest. *Bowcut, Kennedy, & Henricks 1769*.
- FRITILLARIA AFFINIS (Schultes) Sealy var. AFFINIS—Checker lily. Common. Serpentine chaparral. *Botany 102 students 48*.
- SMILACINA STELLATA (L.) Desf.—Slim Solomon's seal. Common. Coast redwood forest and mixed evergreen forest. *Bowcut 1779, Bowcut, Kennedy, & Henricks 1768*.
- TRILLIUM ALBIDUM Freeman—Wake robin. Rare. Oak woodland. *Bowcut & Mawdsley 2088*.
- TRILLIUM OVATUM Pursh—Western trillium. Rare. Vegetative plant observed by author in coast redwood forest. Reported by Stocking (s.d.) and Wright (1975).
- TRITELEIA LAXA Benth.—Ithuriel's spear. Common. Recently burned coast live oak woodland. *Bowcut 1863*.
- ZIGADENUS FREMONTII (Torrey) S. Watson—Fremont's death camas. Occasional. Chamise chaparral/coast live oak woodland ecotone. *Bowcut & Mawdsley 2078*.
- ZIGADENUS MICRANTHUS Eastw. var. MICRANTHUS—Small-flowered death camas. Reported by DiTomaso (1996), Stocking (s.d.), and Wright (1975). Collected on Mt. Hood in 1902 (Best et al. 1996).

ORCHIDACEAE

- PIPERIA ELEGANS (Lindley) Rydb.—Elegant rein orchid. Rare. Two plants observed by the author along Brushy Peaks Trail and seasonal creek which feeds into Malm Fork of Sonoma Creek. No specimens gathered due to small population size. Also reported from the park by R. Coleman (Best et al. 1996).
- PIPERIA ELONGATA Rydb.—Piperia. Collected in the park by R. Morgan (Best et al. 1996).
- PIPERIA TRANSVERSA Rydb.—Piperia. Collected near Adobe Canyon by Baker in 1928 and observed more recently in the park by R. Morgan (Best et al. 1996).

POACEAE

- AGROSTIS PALLENS Trin.—Thin grass. Occasional. Recently burned coast live oak woodland. *Bowcut 1856*.
- *AIRA CARYOPHYLLA L.—Silver European hairgrass. Common. Annual grassland. Native to Europe. *North 31*.
- *AVENA BARBATA Link.—Slender wild oats. Abundant. Annual grassland. Native to southern Europe. *Bowcut, Henricks, & Kennedy 1789*.
- *AVENA FATUA L.—Wild oat. Locally abundant. Annual grasslands. Native to Europe. *North 50, Bowcut 1790*.
- *BRACHYPODIUM DISTACHYON (L.) Beauv. Rare. Coast live oak woodland. Native to southern Europe. *Bowcut 2151*.
- *BRIZA MAXIMA L.—Rattlesnake grass. Common. Roadsides and other disturbed places. Native to southern Europe. *North 15, North 44*.
- *BRIZA MINOR L.—Little quaking grass. Common. Annual grassland. Native to southern and western Europe. *North 42*.

- BROMUS CARINATUS Hook. & Arn. var. CARINATUS—California brome. Common. Mixed evergreen forest. *North 3, North 8*.
- *BROMUS DIANDRUS Roth—Ripgut grass. Abundant. Disturbed places and rocky openings in serpentine chaparral. Native to Europe. *North 1, Bowcut & Kennedy 1815*.
- *BROMUS HORDEACEUS L.—Soft chess. Common. Disturbed places and serpentine chaparral. Native to Eurasia. *North 24, Bowcut, Kennedy, and Henricks 1751*.
- BROMUS LAEVIPES Shear—Brome. Common. Coast live oak woodland and serpentine chaparral. *Bowcut 1914, Bowcut 2150, Bowcut, Kennedy, & Henricks 1752, North 20*.
- *BROMUS MADRITENSIS L. ssp. RUBENS (L.) Husnot—Foxtail chess, Spanish brome. Occasional. Disturbed places. Native to Europe. *North 18*.
- *CYNODON DACTYLON (L.) Pers.—Bermuda grass. Occasional. Roadside. Native to Africa. *Bowcut 2165*.
- *CYNOSURUS ECHINATUS L.—Hedgehog dogtail. Abundant. Grasslands, openings in oak woodland, and in disturbed places. Native to Europe. *North 21, North 47*.
- DANTHONIA CALIFORNICA Bolander var. CALIFORNICA—California oatgrass. Rare. Meadow in center of campground. *North 37, Bowcut, Kennedy, and Henricks 1793*.
- ELYMUS ELYMOIDES (Raf.) Swezey ssp. CALIFORNICUS (J. G. Smith) Barkworth—Squirreltail. Occasional. Serpentine grassland along Stern Trail. *Bowcut 1878*.
- ELYMUS GLAUCUS Buckley ssp. GLAUCUS—Blue wild rye. Common to locally abundant. Annual grassland on edge of coast live oak woodland. *Bowcut 1846, Bowcut 2156*.
- ELYMUS TRACHYCAULUS (Link) Sinn. var. SUBSECUNDUS (Link) Gould vel aff.—Slender wheatgrass. Occasional. Annual grassland burned in July 1995. *Bowcut 2061b*.
- FESTUCA CALIFORNICA Vasey—California fescue. Locally abundant. Oak woodland. *Bowcut 2131 (DAV, NCC), North 29*.
- FESTUCA ELMERI Scribner & Merr.—Elmer's fescue. Occasional. Various habitats. *North 9*.
- FESTUCA IDAHOENSIS Elmer—Idaho fescue, blue bunchgrass. Locally common. Campground meadow. *North 35*.
- *GASTRIDUM VENTRICOSUM (Gouan) Schinz & Thell.—Nit grass. Occasional. Disturbed sites and chamise chaparral. Native to Europe. *Bowcut 2127a, DiTomaso & Kaiser s.n. (private collection)*.
- *HOLCUS LANATUS L.—Common velvet grass. Locally common. Annual grassland. Native to Europe. *Bowcut 1852*.
- HORDEUM BRACHYANTHERUM Nevski ssp. BRACHYANTHERUM—Meadow barley. Occasional. Annual grassland. *Bowcut 1853, Bowcut 2142a (NCC), North 38*.
- *HORDEUM MARINUM Hudson ssp. GUSSONEANUM (Parl.) Thell.—Mediterranean barley. Common. Annual grassland. Native to Europe. *Bowcut, Kennedy, and Henricks 1791*.
- *HORDEUM MURINUM Hudson ssp. LEPORINUM (Link) Arcang.—Barley. Common. Disturbed places. Native to Europe. *North 2*.
- *LAMARCIA AUREA (L.) Moench—Goldentop. Rare. Ruderal situations on Bald Mountain. Native to Mediterranean. *Mawdsley s.n. (private collection)*.
- *LOLIUM MULTIFLORUM Lam.—Italian ryegrass. Abundant. Ruderal situations. Native to Europe. *North 17*.
- *LOLIUM PERENNE L.—Perennial ryegrass. Common. Annual grassland. Native to Europe. *Bowcut 1841, Bowcut 1844, Bowcut 2162*.
- MELICA CALIFORNICA Scribner—California melic. Occasional. Annual grassland and grassy opening in oak woodland. *Bowcut 2155*.
- MELICA SUBULATA (Gris) Scribner—Alaska onion-grass. Common. Mixed evergreen forest. *Bowcut 1782b (DAV, NCC)*.
- MELICA TORREYANA Scribner—Torrey's melic grass. Common. Serpentine chaparral and mixed evergreen forest. *Bowcut 1883, North 5, North 25 (NCC)*.

- NASSELLA CERNUA (Stebb. & Love) Barkworth—Nodding needlegrass. Common. Chamise chaparral. *North 51*.
- NASSELLA LEPIDA (A. Hitchc.) Barkworth—Foothill needlegrass. Common. Chamise and serpentine chaparral. *Bowcutt 2127b, Bowcutt 2140 (NCC), North 27*.
- NASSELLA PULCHRA (A. Hitchc.) Barkworth—Purple needlegrass. Common. Annual and perennial grasslands. *North 32*.
- *PASPALUM DILATATUM Poiret—Dallis grass. Occasional. Roadside in campground. Native to South America. *Bowcutt 2144*.
- *PHALARIS AQUATICA L.—Harding grass. Rare. Chamise chaparral along Brushy Peak trail. Native to Mediterranean Europe. *Bowcutt 1927*.
- *PIPTATHERUM MILIACEUM (L.) Cosson—Smilo grass. Occasional. White alder riparian woodland. Native to Eurasia. *Bowcutt 1931*.
- *POA ANNUA L.—Annual bluegrass. Common. Disturbed places. Native to Europe. *North 4*.
- *POA BULBOSA L.—Bulbous bluegrass. Occasional. Meadow in center of campground. Native to Europe. *North 40*.
- POA SECUNDA J. S. Presl ssp. SECUNDA—One-sided bluegrass. Occasional. *North 34, North 46*.
- POA TRIVIALIS L.—Trivial poa. Occasional. Coast redwood forest. *Bowcutt 1942*.
- *POLYPOGON MONSPELIENSIS (L.) Desf.—Rabbitfoot grass. Common. Disturbed places. Native to Europe. *Bowcutt, Keeney, & Green 1838*.
- *TAENIATHERUM CAPUT-MEDUSAE (L.) Nevski—Medusa head. Locally abundant. Annual grassland. Native to Europe. *Bowcutt 1843b, North 56 (NCC)*.
- TRisetum CANESCENS Buckley—Tall trisetum. Occasional in moist places. *Botany 102 students 9*.
- *TRITICUM AESTIVUM L.—Wheat. Rare. Roadside between horse corral and group campground. Native of Europe. *Bowcutt, Mawdsley, & Knoll 2188*.
- *VULPIA BROMOIDES (L.) S. F. Gray—Brome vulpia, six-week fescue. Common. Ruderal situations. Native to Europe. *North 16, North 39 (NCC)*.
- *VULPIA MYUROS (L.) Gmelin var. HIRSUTA (Hackel) Asch. & Graebner—Rattail fescue. Common. Ruderal situations. Native to Europe. *North 13, North 19 (NCC)*.

TYPHACEAE

- TYPHA cf. DOMINGENSIS Pers.—Cattail. Locally abundant. Along edge of pond in northwestern portion of park. *Bowcutt & Knoll 2183*.

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